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NAVAL POSTGRADUATE SCHOOL
1990 MAINFRAME PROCUREMENT:
A CASE STUDY

by

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This thesis is a case study which reviews the chronological events surrounding the Naval Postgraduate School's (NPS) 1990 mainframe computer procurement. The focus is on the issues which resulted in a protest in 1989 by PacifiCorp Capital, Inc., a systems integrator in the high-technology computer industry. The protest led to a one year delay in which NPS was required to start the procurement process over from the beginning. The major finding is that requesting agencies seldom make major automated data processing equipment (ADPE) procurements and, as a result, may not be fully informed of market trends and industry policies. This can lead to personnel unfamiliar with the current trends in an ever-changing procurement system. Major recommendations include restructuring the procurement process to include extensive training for activities procuring ADPE and emphasizing a Navy philosophy of procuring the "best-value" acquisition that industry has to offer.

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Naval Postgraduate School
1990 Mainframe Procurement:
A Case Study

by

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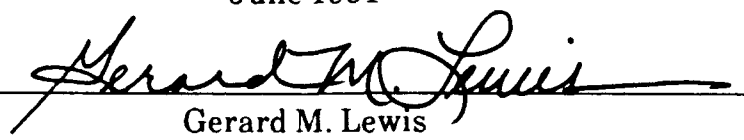
Author: 
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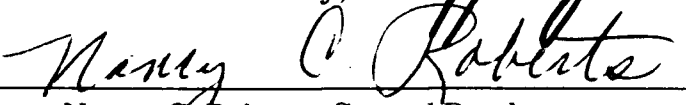
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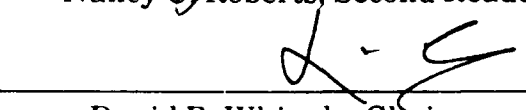
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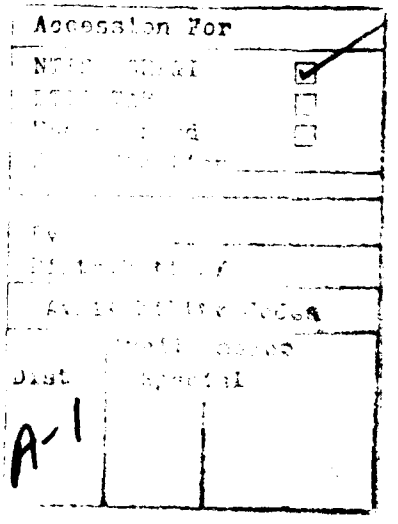
ABSTRACT

This thesis is a case study which reviews the chronological events surrounding the Naval Postgraduate School's (NPS) 1990 mainframe computer procurement. The focus is on the issues which resulted in a protest in 1989 by PacifiCorp Capital, Inc., a systems integrator in the high-technology computer industry. The protest led to a one year delay in which NPS was required to start the procurement process over from the beginning. The major finding is that requesting agencies seldom make major automated data processing equipment (ADPE) procurements and, as a result, may not be fully informed of market trends and industry politics. This can lead to personnel unfamiliar with the current trends in an ever-changing procurement system. Major recommendations include restructuring the procurement process to include extensive training for activities procuring ADPE and emphasizing a Navy philosophy of procuring the "best-value" acquisition that industry has to offer.



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I. INTRODUCTION

A. GENERAL DESCRIPTION

This thesis documents the chronology of events, personnel actions, and related activities which eventually resulted in the procurement of a mainframe computer for the Naval Postgraduate School (NPS) in 1990. It is presented in a case study format and covers the period from 1985-1990.

B. METHODOLOGY

A case study is a description of a real situation that occurred in a real organization. The focus or purpose of a case study is on one or several key issues, decisions, or problems requiring a solution [Ref. 1:p. 1]. The focus of this case study is on the decisions and actions pertaining to the procurement of a mainframe computer and the relevant actions of the cognizant federal agencies.

A case study has been shown to be an effective method for presenting valuable insight into the constant technological change and innovative characteristics of the information systems management field and their effects on management and organizational change [Ref. 1:p. 2].

C. BACKGROUND

The case study documents the NPS 1990 mainframe computer procurement. The procurement was required by NPS to replace outdated International Business Machines (IBM) 3033, models AP and U mainframe computers. These computers incorporate the IBM 370 architecture and were installed in the school's Computer Center in the early 1980s. The mainframe computers support all of the school's general computing requirements and the data base and management information systems of the command's major tenant activity, the Defense Manpower Data Center (DMDC).

DMDC's mission is to support the Office of the Secretary of Defense (SecDef) with computer-based studies and analyses, and operate Department of Defense (DoD) automated personnel systems. DMDC's principal application is the Defense Enrollment Eligibility Reporting System (DEERS) for health-care and other services for all military personnel (active, retired, and their dependents).

Procurement activity began in 1987 with the formation of the NPS Mainframe Replacement Committee. At that time, it was expected that the entire procurement replacing both IBM 3033 models would be completed by September 1989. However, in April 1989, as the request for proposal (RFP) response deadline was approaching, PacifiCorp Capital, Inc., a computer systems integrator, protested the procurement to the General Services Board of Contract Appeals (GSBCA). In their protest

they alleged that the solicitation by NPS was biased in favor of IBM. The GSBCA will also be referred to as "the Board" throughout the thesis.

D. RESEARCH QUESTIONS

This research seeks to answer three key questions. The first question asks what were the key actions and decisions taken by management at NPS for the 1990 mainframe procurement. The second question asks what are the key events of the ADPE acquisition process normally undertaken by Government managerial decision-makers once the need to procure new equipment is determined. The tertiary question lends itself to determining what factors led to the procurement delays, alternatives available, and lessons learned by agencies involved in this particular procurement.

E. ORGANIZATION OF THESIS

The thesis is organized into eight chapters and seven appendices. Chapter II describes the case methodology used, the methodology's relevance as a teaching and research strategy, and the methodology's advantages and disadvantages. Chapter III contains background information on ADP protests. Chapter IV contains the case study documenting the procurement. Chapter V is an analysis of the case study which includes problems discerned by various key Government agencies responsible for federal ADPE procurements. Chapter VI

provides lessons learned based on the case analysis. Chapter VII contains conclusions and recommendations as related to the thesis research questions. Appendix A summarizes key events of the NPS mainframe procurement. Appendix B, figure one is a diagram depicting the Center's IBM system configuration prior to the 1990 mainframe procurement. Appendix C, figure one is a diagram depicting the post-procurement system configuration. Appendix D displays the typical Navy ADP acquisition process. Appendix E contains the PacifiCorp Capital, Inc. letter of protest to the GSBCA. Appendix F contains the summary of protest issues and actions taken by NPS. Appendix G contains a glossary of related abbreviations and acronyms.

II. CASE METHODOLOGY

A. INTRODUCTION

This chapter addresses the thesis case methodology. The use and benefits of a case study for research and teaching purposes is explored. The advantages and disadvantages of a case study in comparison with other research methods is also discussed.

B. CASE STUDY FOR RESEARCH PURPOSES

A definition of a case study used for research purposes is as follows:

A case study is an empirical inquiry that:

- investigates a contemporary phenomenon within its real life context; when
- the boundaries between phenomenon and context are not clearly evident; and
- multiple sources of evidence are used. [Ref. 1:p. 5]

Using this definition, case study research stands on its own as a research strategy. Prior to this definition, a common misconception held by those uneducated in case methodology was that research strategies were of a hierarchial nature. Case studies were considered as being at the bottom part of the hierarchy. Their use was, for the most part, a preliminary to other types of research. Consequently, case

study usage was primarily limited to the exploratory stage of research. Case studies were also viewed as consisting of only one small part of the above definition, that of investigating a contemporary phenomenon within its real life context. Such an instance is evident when case studies are used to only analyze decisions, processes or events. [Ref. 1:p. 6]

There are five recognized research strategies within the social sciences. They are: experiment, survey, archival analysis, history and case study. Experiments, history and case studies are research strategies that apply to a "how" or "why" type of research question. Experiments focus on contemporary phenomena, but require control over behavioral events. History does not focus on contemporary phenomena and also does not require control over behavioral events. As previously defined, a case study focuses on contemporary phenomena in which there is no control over behavioral events. The only difference between history and case study research strategies, besides the focus of the research, past versus present, is that case study researchers have an advantage of adding direct observation and interviews to their research methodology. [Ref. 1:p. 7]

Views on conducting research have evolved to a point that each different type of research strategy is viewed as "a different way of collecting and analyzing empirical evidence." These views have evolved from the narrow niche given to case studies and the wide, prescriptive view given to experiments.

The best type of research strategy is now recognized to be that based on the subject matter and the research purposes. It is generally accepted that there are three different purposes of research; exploratory, descriptive or explanatory. Each research strategy may be used regardless of the purpose. Strategy selection depends on the following three conditions: (1) type of research question; (2) extent of control over behavioral events; (3) focus on contemporary or historical events. [Ref. 1:p. 6]

The case study as a research strategy has been used in many different areas:

- policy, political science, and public administration research;
- community psychology and sociology;
- organizational and management studies;
- city and regional planning research, such as studies of plans, neighborhoods or public agencies,..... .[Ref. 1:p. 11]

The use of case study research has also proven valuable to the information systems domain. Change and innovation have an impact on management and organizational issues in an information systems department. Case study research has been able to provide valuable insights into these issues. [Ref. 1:p. 11]

C. CASE STUDIES FOR TEACHING PURPOSES

According to Dorothy Robyn, "there are two criteria potentially present in any learning situation." These two criteria are the content or specific knowledge to be learned and the learning process. The learning process concerns itself with presenting a general approach or methodology to problem solving and decision making. For instance, a student's knowledge and ability to deal with the reality of life outside the classroom is dependent on both of these criteria. [Ref. 1:p. 12]

Case studies basically follow the principle of "learning by doing." Case studies present real life with all of its associated complexity. Experience with case studies provides students with exposure to a wide range of real life situations which could take a lifetime to experience personally. This experience offers a basis for comparison should the student run into a similar situation outside the classroom [Ref. 1:p. 12].

Generally, a classroom setting presents facts and situations which have only one right answer. A student in a lecture/classroom environment is a receiver of facts. Real life deals with situations in which not all the relevant facts of a decision are available or in which a decision is not straight forward in that there is no right solution. "Case studies are valuable lessons in teaching students the habits of diagnosing problems, analyzing and evaluating alternatives

and formulating workable plans of action." Additionally, students must learn that decisions are not just made from an analysis of the facts. "The decision is a political process...involving power and influence." [Ref. 1:p. 12]

Using case studies in learning situations provides a student with an opportunity to apply theory to a situation within the safety of a classroom environment. In essence a case study is a "simulated experience." An additional benefit is an ability to apply known theory to contemporary happenings to see if a theory holds true. If it doesn't, there is opportunity to search for reasons for a cause and effect. Debates between students over a cause, effect and solution to case study problems provides the benefits of requiring them to question their assumptions and to defend their positions on issues. Other benefits include teaching students the following skills: how to search for facts, choose between alternatives, and determining the essential questions to ask. [Ref. 1:p. 13]

Retired Navy Admiral Stansfield Turner believes strongly in using case studies in a military classroom. He says, "Many of the education programs, are simply cramming officers' heads with facts rather than helping them to develop the skills to deal with difficult problems of leadership, strategy and management." Admiral Turner feels that using the case study method "will help prepare students for the time when they rise

to the level where they really have to make decisions for our country." [Ref. 1:p. 13]

D. ADVANTAGES OF CASE STUDIES

New situations, interactions and problems occur every day. Case studies provide for a description of "holistic and meaningful characteristics of such real life events as individual lifecycles, organization and managerial processes, neighborhood change, international relations, and maturation of industries" [Ref. 1:p. 7].

A unique strength of case study research is its ability to use multiple sources of evidence in presenting data. Such evidence includes documents, artifacts, interviews and observations. This characteristic enables presentation of data from all points of view and perception. Rarely does one view of a situation contain all the pertinent facts contributing to a situation. By having access to multiple sources of evidence, the full story or explanation is easier to piece together. Case study research allows a showcasing of cause and effect factors of a situation or problem. With the active observation of a case study researcher, many details are provided in addition to available written documentation. This facilitates an ability to document the possible causes and effects in a relationship. [Ref. 1:p. 8]

Another advantage can be found in the use of qualitative data. Qualitative data is in the form of words, not the

numbers traditionally relied on. Qualitative data does have some advantages over quantitative data. They are a "source of well-grounded, rich descriptions and explanations of processes occurring in local contexts." Words gleamed from interviews, observations and documentation can indicate people's attitudes, internal relations among personnel and relative power and influence within an organization. Words possess a quality of "undeniability" about them. "Words, organized into incidents/stories provide a concrete, vivid, meaningful flavor that often proves far more convincing to a reader...than a page of numbers." [Ref. 1:p. 8]

E. DISADVANTAGES OF CASE STUDIES

A major difficulty contributing to acceptance of the case study as a significant research strategy is that the data gathered and analyzed are qualitative in nature. "Numbers don't lie" is a popular cliche in support of quantitative data.

This negative viewpoint is based primarily on two factors. One factor is that words can have a variety of meanings. The interpretation given to them by the researcher is viewed as a possibility for bias. The numbers faction prefers experiments where there is control over events. The results, in the form of numbers, are interpreted the same by all analysts. Secondly, there is a preference for being able to control events which brings up the question of replicability. Would

another person viewing the qualitative data of a case study come up with the same conclusions? Would another researcher be able to replicate the entire case study from data gathering through analysis? The question concerning the replicability of a case study adds a degree of uncertainty to the research process. [Ref. 1:p. 9]

Additional uncertainty comes from the lack of detail in the documentation that case study researchers provide on their methodology. Some past case study results have been found to be influenced/biased by the researcher. A contributing factor to this lack of documentation is the lack of accepted and standardized methods for qualitative data analysis, and a lack of a common language. [Ref. 1:p. 10]

There are several other drawbacks to the case methodology. The preparation of case studies is time consuming and their documentation is voluminous. The fact that there is little basis for scientific generalization is also considered a major stumbling block. A typical skeptic of case study research, who is immersed in the quantitative viewpoint, looks to conclusions of the research to be generalizable to other situations. This is not the intent of case study conclusions. "Case study conclusions are generalizable to theoretical propositions and not to populations or universes." They are not even generalizable to other organizations. "In this sense a case study does not represent a 'sample' and the investigators' goal is to expand and generalize theories

(analytic generalization) and not to enumerate frequencies (statistical generalization)." [Ref. 1:p. 10]

An example of a case study giving emphasis to a theoretical concept is the Cuban missile crisis. This exact situation will never happen again, but there are general lessons that can be learned. These lessons include "the management of the problem, and the role of organizational routine in shaping events and decisions." [Ref. 1:p. 11]

F. METHODOLOGY OF THIS CASE STUDY

This case study concerns the series of events surrounding an ADPE procurement which involved more than five years of planning effort. Interviews and questionnaires were used in acquiring thesis information. Interviews were conducted both in person and via telephone and facsimile equipment. During the interview phase, the typical questions posed were:

(1) In your opinion, what went wrong in the NPS procurement?

(2) What could NPS have done to avoid this protest scenario?

(3) What recommendations can you offer with regard to ADPE acquisition that would inevitably aid other Government agencies to minimize similar protest dilemmas in the future?

The questions posed and information sought was predominantly from Department of the Navy (DoN) agencies directly involved with the procurement. However, other federal agencies, such as the Department of the Air Force, Department of Justice, General Services Administration (GSA),

Federal Systems Integration and Management (FEDSIM) Center, and Naval Air Development Center (NAVAIRDEVCEN) were contacted. Key individuals from these organizations provided information regarding the case. High-level executives from several of the mainframe computer industry's firms such as IBM, Amdahl, VION, PacifiCorp Capital, Inc., were also contacted for comments regarding the acquisition. Others contacted for information included professors at both George Washington University and New York University.

Most of the feedback received as a result of queries regarding this case study were individual perceptions of the overall process based on the outlook of the individual's responsibility in the procurement process. The GSA had their reasons why the procurement was protested as did everyone else. However, there were several common threads that appear to be factors in this mainframe computer acquisition. These common factors will be discussed later in the chapter covering lessons learned and recommendations.

III. ADP PROTESTS

A. INTRODUCTION

This chapter is intended to give the reader background and insight into ADP protests which may provide one an opportunity to understand current industry trends. The views presented belong to key individuals representing federal agencies responsible for the effective and efficient procurement of ADPE.

B. BACKGROUND

The Competition in Contracting Act (CICA) of 1984 sets forth a mechanism for bidders to protest the Government's actions on a procurement. This protest mechanism brings attorneys representing agencies and vendors together at a hearing. Protests can be filed at any time after the procurement is released to the public. Protests are typically filed at three times:

(1) before the bids are due to protest the specifications;

(2) after the bids are received to protest being eliminated from consideration before award;

(3) after the award is made to protest not receiving the award.

Typically, when a protest is filed, the award is suspended, revoked, or revised by the GSBCA. CICA requires

that protests be resolved within 45 working days. The GSBCA is responsible for reviewing the protests and taking the vendor(s) who presented them to task to ensure that frivolous claims do not make their way to the decision table.

There are many possible outcomes to a protest. The GSBCA can disallow the protest; can allow the procurement to stand but award the protestor their proposal and legal costs; can overturn the procurement (awarding the protester their proposal and legal costs) and require the procurement to be done all over again, etc.

It should be understood that a great deal of the time, when the federal Government feels it cannot successfully defend its position regarding ADP procurements in court, it will settle a case out of court and may agree to pay court costs and legal fees to the protesting vendor. This results from the fact that vendors in industry pay highly trained and specialized corporate lawyers to represent their protest cases when they feel they have an opportunity to succeed. Federal agencies on the other hand, maintain corps of general-purpose legal counsels who are non-ADP procurement specialists. Federal lawyers are not trained by the Government to be specialists. Therefore, they stand a greater chance of defeat during ADP protest proceedings. The following is a somewhat opinionated quote from an industry source:

> "One billion dollars have gone to lawyers since the GSBCA's inception. The protest mechanism was created by lawyers for lawyers. The lawyers who created the original mechanism are now judges. Some of these same judges are hearing the protest cases at the GSBCA. Industries often have to intervene on behalf of the Government to ensure that the contract or award won is maintained. Failure to intervene at the critical time may spell disaster for a company due to known Government ineptness." [Ref. 2]

Protests can be a multiparty suit. Most protests after award are three-party suits; the award loser (protestor), the Government (respondent), and award winner (intervenor). Other offerors or the contract winner can offer to intervene on behalf of the Government and often do. The "Gang of Six" protest, which is presented to the reader in chapter IV, was a multiparty suit in which a group six vendors decided to collectively protest a Navy ADPE procurement on the grounds of IBM-bias.

Each year, federal agencies collectively issue tens of thousands of solicitations to procure a vast array of ADPE and services. Statistically speaking, they do a good job and perform well. Since 1985, only four-tenths of one percent of all computer-related procurements have been protested through the GSBCA. However, more recent events are disturbing. Between 1988 and 1989 protests have increased 62 percent as more vendors began using the Board's judicial forum. [Ref. 3:p. 48]

As computer technologies proliferate, federal technology acquisitions increasingly involve lengthy and complex

purchases. At the same time, federal budget dollars are severely strained by fiscal cutbacks. [Ref. 3:p. 48]

Dr. Norman Brown of the Office of the Assistant Secretary of the Navy for Shipbuilding and Logistics (ASN (S & L)) states: "There is a common thread between agencies and industries: the bigger the contract, the bigger the risk and opportunity for protest." [Ref. 4]

David S. Cohen of Cohen & White in Washington, D.C., a legal firm which specializes in Government high technology contracts has stated that the protest system "relies on those hurt to blow the whistle and bring their problems forward" [Ref. 3:p. 48]. This is highly desirable for the computer industry in our economic system which promotes and defends full and open competition in accordance with the CICA.

"Protests are becoming part of vendors' strategies, rather than just a way to remedy wrongdoing," says Eben Townes, director of acquisition management services for International Data Corp in Vienna, Va. The reader may find it hard to believe that market trends for protests are reflective of vendor strategies; however, Federal Systems Group Inc., Vienna, Va., a data communications equipment maker and frequent protester, takes this approach. The company came before the Board no less than three times in the first quarter of 1989. "It doesn't cost us much to take the Government to task," says Stephen Mills, Federal Systems' vice president of

systems integration. "If there's a way we can win, we'll protest." [Ref. 3:p. 48]

Why is this practice of protest becoming part of the strategy for companies? Another view, by Mr. Robert Finkelman, Director of the Computer Department at NAVAIRDEVCEN in Warminster, Pa., states: "In the past there was a lot of money for ADP acquisition. Today, the money is scarce and competitors are aggressively vying for a bigger piece of a shrinking pie." Mr. Finkelman goes on to say, "The procurement system worked well before the end of the 1980's. The reason people did not protest more often then was because all competitors felt that they were getting their fair share until defense spending was severely curbed. The NPS procurement was only one of thirty seven procurement cases in an eighteen month period. Only one of thirty seven was not awarded after being protested." [Ref. 5] In FY 1989, there were 37 protests filed with the GSBCA against the DoN. Altogether during this timeframe, 39 GSBCA decisions were handed down, including a fraction of the 37 filed. [Ref. 6:p. 32] In FY 1990, there were 50 protests filed with the GSBCA against the DoN of which 37 GSBCA decisions resulted. [Ref. 7:p. 24]. One can see that protests are indeed on the upswing.

In a number of cases the GSBCA has had to make judgmental decisions about contracts that had little to do with the detailed procedures they typically consider. These cases have

included such issues as an agency's overall methods for awarding contracts and its justifications for avoiding full and open competition. In many of the cases, the Board has accepted the agency's position. As a matter of fact, since 1985, protesters have achieved some of their objectives in only 37 percent of all cases brought before the Board, while 31 percent of all ADPE protests have been dismissed or denied. Only 21 percent of all protesters have recovered some or all of the protests costs and/or pre-bid costs. [Ref. 3:p. 50]

There is rising federal concern that vendors are filing protests merely to delay a procurement or to obtain a competitive advantage. For example, in 1989 the Board concluded that VION Corp., upon contesting provisions in an U.S. Army solicitation shortly before offers were due, and by then behaving uncooperatively during the pre-trial discovery process, was more interested in securing "a tactical advantage over the Army" through confusion and delay than in pursuing a just cause. VION Corp.'s rationale for noncompliance was that they felt the likely awardee's contract contained hidden deficiencies that only the vendor community, but not the Government, were able to see. By maintaining silence or contempt, VION Corp. was attempting to influence administrators of the contract to think twice about selecting the most probable awardee. The Army filed legal action which compelled VION Corp. to disclose any relevant information

being withheld. This matter was presented to the GSBCA and the Board dismissed the case. [Ref. 3:p. 50]

In the NPS mainframe protest, IBM spokesman Mark Holcomb was cited in the May 1, 1989 issue of Government Computer News as saying: "To our knowledge the specifications in the RFP reflect the Navy's true needs and do not preclude the protester or other vendors from bidding. We think the protest is part of a marketing strategy that blatantly attempts to intimidate the Navy to remove certain innovations from the technical specifications that would make it more favorable for their product lines." Holcomb was eluding to the idea that when IBM competitors find that they cannot provide a requesting agency with state-of-the-art products, they will protest in an effort to be allowed to offer old technology. Federal regulations allow a 12 to 18 month grace period to IBM competitors allowing them time to copy IBM developments and to begin their own production. In the May 4, 1989 issue of the Washington Post, when asked to comment about the protest Holcomb was again cited to say that "This protest had another purpose." The company stated that the only advantage that it (IBM) had came from its willingness to develop technology to meet increasingly sophisticated needs.

A representative for a major ADPE firm stated during a telephone conversation that competitors in the mainframe business will protest the solicitation process or an award when they feel there is a "good chance of winning". "Winning"

may be equated to the actual awarding of the contract or the right to have legal court costs paid by the vendor or agency playing the role of defendant. The losing vendor has nothing further to risk by protesting. In fact, he stands a better chance to come out ahead.

C. PROTEST-FREE PROCUREMENT

The most often heard complaint from vendors is that the Government does not do a good enough job spelling out its needs. Most consultants, attorneys, and GSA itself agree that the answer to minimizing protests lies in better agency-vendor communication through all phases of procurement. And when protestable situations do arise, agencies should try to resolve more of them before they reach the Board. [Ref. 3:p. 50]

In a recent FIRMR Bulletin, GSA recommended that agencies establish independent review boards of their own to handle vendor complaints and to avoid formal protests [Ref. 8:p. 26].

One key recommendation for minimizing protests in ADPE procurement is to centralize the management of protest cases. The Air Force and the Army have taken the first step in this direction of streamlining responsibility for protest cases by assigning responsibility for them to one competition advocate, a specialist in GSBCA procurement cases. [Ref. 3:p. 50]

Carl Peckinpaugh, attorney with the Secretary of the Air Force (SecAF), Office of General Counsel (Procurement), handles about 30 protests a year. Says Peckinpaugh: "Centralized management of these cases helps put the agency on the same footing as the protesters' private attorney." Peckinpaugh also serves as ombudsman to the vendor community, fielding questions and resolving as many protests as possible before they reach the Board. [Ref. 3:p. 50]

Consolidation of responsibility for ADP procurements in a central buying activity is the best way to improve the quality of contracting and to avoid and win protests [Ref. 8:p. 26]. Centralization allows for the development of genuine, substantive expertise by contracting personnel. This expertise allows for not only avoiding protests, but also for good, sound contracting [Ref. 8:p. 28].

In addition to centralized protest management, agencies can take several additional steps to minimize the likelihood of protests. The following are from the references cited:

- Develop and write representative benchmarks which reflect the workload and are characteristic of the throughput of the system required. Agencies desiring the procurement of ADPE must understand that benchmark development is a long process which requires a great deal of research effort. Agencies should request from GSA to have FEDSIM evaluate benchmark specifications and benchmark test beds.

- Provide more detail in RFPs and adequately describe what you need. The more offerors know, the less likely they are to protest at a later date. [Ref. 3:p. 50]

- Put yourself in the vendor's shoes in order to make the procurement specifications as clear as possible [Ref. 3:p. 50]. Writing the Government's specifications clearly, and in truly functional terms rather than dictating a design, will help to minimize any restriction on competition and allow as many vendors as possible to compete [Ref. 8:p. 25].

- Tell offerors what you want them to achieve, then let them design solutions and specify equipment. Do not be overly restrictive by specifying brand-name equipment, which is sure to spark protest. [Ref. 3:p. 50]

- Make sure that the vendor's evaluation of what an agency needs matches the solicitation with respect to such factors as cost, technology, and management [Ref. 3:p. 50].

- Add quality-control experts to your technical acquisition team. People who understand the complexities of the procurement system are as vital as the technicians preparing the procurement specifications [Ref. 3:p. 50]. Be sure the technical evaluators are intimately familiar with the requirements expressed in the RFP. It is absolutely critical that agencies have a team of experts who are familiar with the technical, contracting, and legal aspects of each type of acquisition [Ref. 8:p. 27].

- Everyone who works on a procurement, including those at the highest levels, must take the time to become completely familiar with the relevant documents, and to act as part of a team. Although the protest forums will accord considerable deference to anyone who is qualified and acting reasonably, they will not hesitate to chastise even high officials who do not do their job. [Ref. 8:p. 27]

The following is a quote from Mr. Michael Jones, Manager of Navy Accounts at the VION Corporation:

> "Plan to negate strength of GSBCA appeals by vendors to which the federal Government has a tendency to lose by documenting requirements that should be met to the fullest." [Ref. 2]

Many agencies may be reluctant to alter a functioning procurement system to accommodate these recommendations.

However, though the pressure on agencies to sharpen their procurement skills may be coming from outside the Government, it is the Government that stands to benefit the most. A clear and thorough solicitation ultimately results in better computer-related acquisitions. [Ref. 3:p. 50]

D. SUMMARY

In this chapter, it was pointed out that the requesting agency must develop representative benchmarks and cite only functional requirements substantiated with corroborative documentation. To be effective, agency personnel must allow sufficient time for benchmark research and design. ADPE acquisitions must be planned with a well balanced and organized team of technicians, lawyers, and contractors. All requesting agencies must study the procurement regulations and call for assistance from more senior service activities, GSA or other federal agencies who are equipped and willing to help. In the following chapter a case study of the NPS mainframe procurement is presented for the reader.

IV. CASE STUDY

A. INTRODUCTION

Chapter III provided background for ADP protests. In this chapter, the NPS mainframe procurement is presented as a case study in a manner which attempts to represent all aspects of the procurement, the protests by PacifiCorp Capital, Inc. and other related issues.

B. CASE STUDY

1. Background

The W.R. Church Computer Center at the Naval Postgraduate School (NPS) offers a wide range of services to support the computational and information processing needs of the educational, research, and administrative programs at the school and the tenant activities.

Most of the services provided by the Center are provided by an IBM 3033/4381 network which supports both high-volume batch processing and general-purpose timesharing at remote terminals.

Since 1975 the Center has provided substantial data processing support to a tenant activity, the Defense Manpower Data Center (DMDC). In addition, small amounts of computer time are occasionally provided on a non-interference basis to other Government agencies.

The IBM 3033 Attached Processor (AP) system was installed in December 1980. With the procurement of this system, a major shift in emphasis from card processing to terminal-oriented computing was accomplished. In 1983 an IBM 3033 Model S was installed loosely-coupled to the IBM 3033 AP.

In July 1985, plans to acquire a new mainframe were formulated as part of the 1988 Program Objectives Memorandum (POM). The NPS POM was submitted to the Field Support Activity and school's Major Claimant, OP-09BF, for review and inclusion in the Chief of Naval Operation's (CNO) POM to the Secretary of the Navy (SecNav). Allocation of funds was approved in the fiscal year (FY) 1988 defense budget. After approval, these investment-type appropriations, categorized as Other Procurement Navy (OPN), had an obligation duration of three years. This meant these appropriated funds had to be obligated i.e., a contract awarded, by the end of FY 1990--30 September, 1990. The reader shall see the significance of this three year obligation time frame as the case discussion continues.

In December 1985, the IBM 3033 Model S (8 MBytes) processor was upgraded to a 3033 Model U (16 MBytes), and an IBM 4381-M1 was added to the system to create a three-processor network. These two units are the global and local systems respectively of MVS/SP Release 1.4 with JES3 Networking operating system supporting the following types of work:

- Batch processing of larger jobs (CPU time, size, input/output, etc)
- Multi-tape jobs (DMDC/DEERS data, scientific data collection)
- Customer Information Control System (CICS) transaction processing on the DEERS database and NPS Library's bibliographic retrieval system
- All production printing (generated on VM and MVS), publication quality

The 3033AP system provided interactive service by running VM/SP Release 5 with CMS operating system supporting the following types of work:

- 1600 CMS users per month, of whom 200 are simultaneously active during peak periods
- executive driven, batch-like runs of large jobs overnight and on weekends
- administrative database applications under FOCUS (academic record-keeping, financial data)

The IBM 4381 was upgraded to Model P13 in June 1987; at the same time the IBM 3850 mass storage cartridge system was replaced by IBM 3380 disk storage and IBM 3480 tape cartridge units, both systems being controlled by the Hierarchical Storage Management (HSM) software facility. The IBM 4381 was upgraded from a Model P13 (16 MBytes) to Model Q13 (24 MBytes) in July, 1988. An IBM 3088 Multi-System Channel Communication Unit (MCCU) connects the 3033AP, 3033U, and 4381 Q13. Appendix B, Figure 1, shows the IBM 3033/4381 computer network before the 1990 procurement.

2. **Procurement**

In the Summer of 1987, a Mainframe Replacement Committee was formed and the NPS launched a study to plan a modernization and upgrading project required to support academic computing throughout the 1990's. The most critical aspect of the project was the replacement of the IBM 3033AP and 3033U processors presently installed in the school's Computer Center. It was estimated that by the time the procurement was effected, (it was initially estimated that both the 3033AP and the 3033U processors would be replaced by September 1989), the two aging IBM 3033 systems would have been installed in the Center for nine years and would be fourteen years old technologically. In addition to being obsolete, the 3033s were underpowered and overloaded, in that they were inadequate for handling the volume and throughput performance requirements of the school's workload.

Historically NPS procured major ADPE on the average of every eight to ten years. Therefore, in the 1990 procurement, it was an objective of NPS to obtain ADPE which would allow for growth to meet user requirements and have the potential to be upgraded substantially in later years.

The upgrading plan had four major components, namely:

(1) Replacement of processor nucleus of the IBM network retiring the IBM 3033 processors;

(2) Replacement of student public terminals;

(3) Connection of existing computers and LANs via a campus backbone network;

(4) Addition of a special purpose super-minicomputer on the network dedicated to numerically intensive computing.

The general objectives of this project were to:

- upgrade the centrally-managed, service computing systems,
- interconnect the existing departmental computers and LANs, and the centralized facilities in a campus-wide backbone network, and
- provide improved, high-performance gateways to off-campus systems.

This thesis will address only the procurement of component (1) of the project, replacement of the IBM 3033 processors. This proposed procurement would replace only the IBM 3033 processors in the Center's IBM network. The auxiliary storage, communications processors, and other peripheral devices were to remain. Studies were done using the Conversion Cost Model developed by FEDSIM to estimate the lifecycle cost of the procurement. After an extensive iterative study, the school was able to determine that the lifecycle cost to procure a non-IBM plug-compatible mainframe would be approximately $160 million. This figure is based on software and hardware conversion costs plus facility remodeling and reconfiguration cost estimates. Due to the fact that only the processors would be replaced, a major

decision was made by the school to seek IBM plug-compatibility.

The Mission Element Needs Statement (MENS) was approved by the Commander, Naval Military Personnel Command (NMPC), OP-16, in May 1986. NMPC is the functional sponsor of the NPS, the Naval Academy, and the Naval War College. It was for this reason that NMPC approved the school's MENS. In November 1987, NPS drafted and submitted an Analysis of Alternatives and Abbreviated Systems Decision Paper (ASDP) via the ADP approval echelon for review and approval. The ADP approval echelon is as follows: 1) NPS; 2) OP-09BF, Field Support Activity and school's Major Claimant; 3) NMPC (OP-16); and finally, 4) NAVDAC (Naval Data Automation Command--now Naval Computers and Telecommunications Command (NCTC)). By January 1988 the ASDP (rated at $21 million) was approved and NPS received the approval to continue with the procurement process. Because the estimated purchase price was greater than $2.5 million, NPS was required to obtain a specific Delegation of Procurement Authority (DPA) from the GSA in accordance with Federal Acquisition Regulation (FAR) 270.303-2. The DPA was received on 18 March 1988 from the GSA under case number KMA-88-0202 and it provided the Naval Regional Contracting Center (NRCC) Detachment Long Beach (henceforth noted as NRCC) with the authority to perform the procurement. As stated previously, this thesis will only review the facts surrounding the replacement or the processor nucleus of the

IBM network. The lifecycle cost for processor replacement was estimated to be in the vicinity of $10 million. The procurement threshold limits of NRCC was $10 million; however, there was speculation that the processor procurement would exceed this amount. The school was concerned that such a situation would occur and therefore contacted the Navy's Automatic Data Processing Selection Office (ADPSO). ADPSO however, would not accept the NPS mainframe procurement because it was too minor of an acquisition. ADPSO is accustomed to handling hardware procurements which range from $50-100 million. Therefore the procurement remained with NRCC. Appendix C, Figure 1, displays the planned configuration of the NPS mainframe suite after procurement was expected to be completed in September 1989.

On 4 August 1988, NPS delivered draft copies of the RFP Sections C, L, and M for review by NRCC. Inputs by the school included items such as software and hardware requirements, manuals and documentation, contractor support, maintenance of equipment, software maintenance, and benchmark test results.

On 15 March 1989, one month after the House Subcommittee commenced its investigation, Solicitation Number N00123-88-R-1013 was issued by NRCC for the NPS mainframe procurement. This was in the midst of allegations of IBM preference by the "Gang of Six". Proposals from industry were

to be submitted within one month, no later than 14 April 1989.

In early April 1989, the Department of the Navy ADP Acquisition Assessment Panel (DoN ADP AAP) was established to review Navy and Marine Corps computer acquisitions and charges of bias as a result of the "Gang of Six" allegations. This "blue ribbon" panel was co-chaired by the Navy's Competition Advocate General, RADM William H. Hauenstein, and the Director of the Navy's Information Resources Management, RADM Paul E. Tobin. The Navy panel was established to give SecNav a "feel" for the magnitude of any problems uncovered and to recommend solutions to these problems. With regard to the "Gang of Six" and other protests, the panel met 19 times and reviewed 40 different topics. It met with the six vendors three times and three times with IBM. When the panel was established, it had no idea that on the horizon loomed another protest by PacifiCorp Capital, Inc. against the Navy, this time against the NPS mainframe procurement. During this period prior to the protest two RFP amendments were issued. Amendment One was issued for the purpose of inserting an extraneous contracting clause and also to correct typographical errors. On 7 April 1989, NRCC contracting officials sent out a mailgram notifying vendors that it would issue Amendment 2 in response to vendors' questions regarding the school's RFP. The RFP closing date was extended to 28 April 1989.

3. Protest

On 11 April 1989, PacifiCorp Capital, Inc. protested the NPS solicitation to the GSBCA stating that 1) the NPS procurement contained extremely restrictive requirements that IBM competitors could not meet, 2) it was an IBM sole source procurement disguised as a competitive acquisition, and 3) the NPS has displayed a pattern of bias in its acquisition of IBM products [Ref. 12:p. 1]. The protest centered on Section C (Description/Specification/Work Statement) of the RFP. Appendix E contains the PacifiCorp Capital, Inc. letter of protest to the GSBCA. Appendix F provides a summary of protest issues and action taken by NPS. These allegations were added to those already being considered by legislators on Capitol Hill and the DoN ADP AAP which was investigating the purported IBM-preference charges by the "Gang of Six". The NPS procurement thus took on a political twist.

On 14 April 1989, the GSBCA suspended the school's solicitation and assigned the case protest number KMA-88-0202. The GSBCA hearing was tentatively scheduled for 16 May 1989.

On 30 April 1989, an internal memo from the Navy legal counsel at NRCC assigned the case to a Navy legal colleague in Washington, DC, was inadvertently faxed to attornies at PacifiCorp Capital's law firm. The contents of the fax were leaked to the press. It backed the protester's claim of IBM bias in the solicitation. The document said in part, "I've put on my judge's hat of two years ago and believe

that we would lose on the bias charge. The evidence of closeness between the school and IBM keeps growing." The counsel characterized the procurement as showing "bias or at least the lack of a functioning brain." [Ref. 11:p. 18]

4. Politically Sensitive Issues

The NPS procurement may have been significantly influenced by a number of politically sensitive issues that resulted in considerable adverse publicity for the DoN. The following is a synopsis of those critical and impacting events.

On 4 October 1988, PacifiCorp Capital, Inc. filed a protest with the GSBCA regarding the Navy's $150 million solicitation in the third phase of the Data Processing Installation Equipment Transition (DPI-ET Phase III). The DPI-ET Phase III was intended to install IBM-compatible mainframe computers in the nine Navy Regional Data Automation Centers (NARDACs) and in five Navy Regional Data Automation Facilities (NARDAFs).

On 17 November 1988, a letter was delivered to Secretary of Defense (SecDef) Carlucci from a group of six vendors: Amdahl Corp., NCR Comten, Storage Technology Corp., Memorex Telex Federal Systems, PacifiCorp Capital, Inc., and the VION Corp. The group of six vendors, who later would be called the "Gang of Six", complained to SecDef that the Navy had unfairly favored IBM products and were not adhering to the

law in accordance with the Competition in Contracting Act (CICA) of 1984. (It should be pointed out that the CICA was passed in order to ensure full and open competition in federally funded procurements by providing a "level playing field" on which all competing contractors would have an equal opportunity, through arms-length dealings, to sell to the federal Government.)

The letter contended that the Navy routinely designed or "wired" specifications around IBM corporate and product features to preclude any real competition to IBM. Furthermore, it accused Navy officials of "manipulating the procurement process" to IBM's advantage. It cited instances of using such tactics as multiple best and final offers (BAFOs) that extend the bidding until IBM's bid is considered low enough to win the contract. Multiple BAFOs exist when discussions regarding a contract award are reopened under the guise that it is in the best interest of the Government. The DoD FAR 15.611 (Best and Final Offers) subsection (c) states that discussions shall not be reopened and if a situation requiring further discussions occurs, the contracting officer shall issue an additional request for best and final offers to all offerors still in the competitive range. The calling for multiple BAFOs is neither ethical nor legal. Calling for multiple BAFOs can easily be construed by vendors to be preferenced "auction" work.

In addition to complaining about the Navy's procurement practices, the letter also identified six previously awarded Navy procurements alleged to have shown preference towards IBM. The "Gang of Six" requested that Mr. Carlucci personally order an investigation into the Navy's procurement practices [Ref. 9: p. 1].

On 8 December 1988, the GSBCA ruled in favor of PacifiCorp Capital, Inc., (representing the "Gang of Six" in GSBCA case no. 9732-P) sustaining their protest and stated that the Navy had unfairly favored IBM in the previously cited 1987, 10-year, $150 million solicitation for replacement of the mainframe computers under DPI-ET Phase III [Ref. 10:p. 975]. The GSBCA concluded that the solicitation provided for less than full and open competition, and that the Navy had failed to adequately justify restrictions on competition. As a result of the ruling by the GSBCA, GSA canceled the DPA for the procurement. The Navy had previously argued that performing a sole source procurement would result in lower prices, eliminate compatibility problems, minimize hardware replacement, and would cost less administratively [Ref. 11:p. 63]. The Navy eventually canceled the solicitation for DPI-ET Phase III.

In February 1989, the House of Representatives' Subcommittee on Legislation and National Security initiated an investigation into allegations of improper behavior and IBM bias after vendor's complaints of unfair procurement practices

within the Navy's multi-billion dollar ADP market. Since that time, the investigation has been expanded to cover other agencies including the National Institute of Health, National Aeronautics and Space Administration, and the Treasury Department; all large buyers of ADPE. [Ref. 11:p. 2]

On 19 April 1989, an explosion inside the 16-inch gun turret on the battleship U.S.S. Iowa (BB-61) killed 47 sailors and few weeks later, on 9 May, a fire caused by a fuel leak in the engine room of the Navy combat supply ship U.S.S. White Plains (AFS-4), claimed the lives of six sailors. These Navy mishaps drew the immediate attention of the media.

On 14 May 1989, an explosion and fire aboard the aircraft carrier U.S.S. America (CV-66) killed two crew members after a fuel pump exploded while the ship was operating in the Atlantic Ocean. Again the Navy received enormous negative publicity from the media.

During April 1989, the Navy Inspector General reopened the investigation of the Computer Science Department incident regarding mishandling of workshop funds donated by IBM. The initial investigation by the IG took place in 1986 and was unknown to anyone in the Computer Center to have occurred. The original investigation of the matter found no evidence of criminal misconduct, but discovered that regulations prohibiting gratuity had been violated. The second review by the IG was a direct result of the PacifiCorp Capital protest letter sent to the GSBCA. The letter stated that the Computer

Science Department incident showed evidence that the NPS and IBM had a very close relationship which suggested reasons for IBM bias in the school's mainframe procurement. The final IG report stated that there was no evidence that the incident had any bearing on the procurement.

In July 1989, the House Armed Services Committee (HASC) responded to GAO reports of mismanagement of ADP resources in DoD by suggesting that no further funding would be forthcoming until a strategy was devised to correct deficiencies.

On 2 August 1990, Iraq invaded Kuwait and the U.S. in concert with its allies responded by sending troops and arms in an effort to avert further aggression by Iraq. In order to fund this operation then known as "Desert Shield", the DoD froze all unobligated funds and designated them for use in supporting theater operations. Among the assets frozen by the DoD were funds to be used by NPS in the acquisition of the mainframe.

5. **Settlement**

After discussions with the Office of SecNav, the members of the DoN ADP AAP, and Navy legal counsels, the chairmen of the DoN ADP AAP determined that winning the NPS case before the GSBCA would be a difficult task. The panel, considering the risks and benefits, determined that it would be better to settle out-of-court and pay the legal fees

($45,000) to the plaintiff rather than to attempt to take the case into GSBCA court, risk the possibility of losing and possibly having to pay legal costs, which were estimated to go as high as $500,000. Sources at GSA have stated that legal costs include attorney fees, protest preparation costs, and proposal preparation costs [Ref. 16]. The protestor normally accounts for all associated costs down to the penny and then requests the GSBCA judge to rule on the costs award [Ref. 16]. It is not uncommon for the GSA to witness protest settlements which exceed $1 million [Ref. 16].

On 11 May 1989, the Navy and PacifiCorp Capital, Inc. reached an out of court settlement and the protest was dismissed without prejudice. The following were the principle terms of the settlement:

- The solicitation is to be canceled within five days [Ref. 13:p. 18].
- The follow-on procurement is to be conducted under the auspices of the DoN ADP AAP [Ref. 13:p. 18].
- The follow-on solicitation is to be conducted in accordance with the terms of the motion to dismiss the protest [Ref. 13:p. 18].
- The follow-on procurement is to be conducted as a single acquisition to include hardware, software, and services [Ref. 13:p. 18].
- The follow-on procurement is to be processed by the Automatic Data Processing Selection Office (ADPSO) instead of NRCC, Long Beach [Ref. 13:p. 18]. ADPSO buys all high value (above $10 million) general-purpose nontactical commercial ADP resources, and develops policy and approval requirements for awarding and administering contracts [Ref. 11:p. 10].

- The follow-on Navy analysis of the NPS requirement is to be made publicly available for review and comment and is to be announced in the Commerce Business Daily [Ref. 13:p. 18].

- The Navy's ADP AAP, or DONIRM, is to consider any comments received regarding the requirements analysis. Any vendor is to have the right to request the panel to change the follow-on solicitation or take any other action required by the motion to dismiss the protest. [Ref. 13:p. 18]

- The Navy is to state its requirements to permit at least all manufacturers and their authorized dealers of IBM or IBM plug-compatible hardware and software to compete for the award. [Ref. 13:p. 18]

- The Navy is to measure an offeror's compliance with the specifications through the use of a benchmark test. [Ref. 13:p. 18]

- Subject to stated exceptions, the follow-on procurement is not to require support for, or installation of, any engineering changes for hardware, software, or feature not supported by all plug-compatible manufacturers at the time the solicitation is issued. [Ref. 13:p. 18]

On 12 May 1989, NRCC canceled the solicitation in accordance with procurement regulations.

On 8 September 1989, as a result of the settlement of the PacifiCorp Capital, Inc. protest, the DoN ADP AAP began to review the NPS mainframe procurement to determine what problems, if any, existed in the original RFP and to consider the school's proposed changes to clarify or remove some of the system requirements.

6. Procurement Reinitiation

In November 1989, in accordance with the settlement, a new contracting office was assigned and ADPSO, Washington, DC., initiated procurement actions to acquire the mainframe

for NPS. ADPSO was assigned procurement activities due to the out-of-court settlement. ADPSO was also better prepared to provide NPS greater technical expertise than NRCC.

Between the months of November 1989 and March 1990, the school was working feverishly revisiting and rewriting the life cycle management studies. This included the rewriting of documents such as the requirements analysis, software conversion study, analysis of alternatives, and benchmark.

In March 1990, the NPS procurement project was received at ADPSO.

On 6 April 1990, ADPSO released the school's draft RFP, Requirements Analysis (RA), and proposed benchmark for industry comments and suggestions in accordance with the settlement agreement. Comments were received by 9 May 1990, written responses were distributed by ADPSO. As a result of inputs received from industry, the school dropped the MIPS and MFLOPS requirement and decided to depend solely on the benchmark results to establish performance levels of the mainframe. On 13 July 1990 the final RFP was released for competitive bidding. This RFP, as had the previous one, had a clause in Section M ((Evaluation Factors for Award) that stipulated to the vendors that the Government reserved the right to make the contract award without discussion or deliberation. Offers from industry sources were due to the procurement office by 13 August 1990.

7. **Award**

Prior to 2 August, NPS and ADPSO were working hard to make the source selection and award of the mainframe contract before 30 September, the end of FY 1990. Recall that funds for the mainframe were appropriated as a result of the FY 1988 POM and that they had to be obligated within three years i.e., not later than 30 September 1990. After suffering the harsh reality of a protest, the exhausting ordeal of regenerating all of the required documents, and a year's delay in the procurement, NPS now faced a lack of funding. This setback required many telephone calls and letters from the Superintendent and Comptroller in an effort to get reserve funds released for the acquisition. On 13 August 1990, NPS and ADPSO began to evaluate proposals in terms of costs and technical acceptability. On 24 August 1990, NPS and ADPSO determined the ranking of Offers. The likely winners (the one with the least-cost technically acceptable proposal) performed the pre-award benchmark test on 10 and 11 September 1990. The contract award was made on 21 September 1990 to PacifiCorp Capital, Inc. who had bid Amdahl computers.

The follow-on procurement had proven to be one of the most rapid acquisition processes ever handled by ADPSO. It took 6 months from procurement request to contract award. Appendix D desribes the typical Navy ADP acquisition process. A funded delivery order was issued on 21 September 1990 and the delivery of the initial system was set for December 1990.

Appendix A, Section A, summarizes key events of the NPS mainframe procurement. Appendix A, Section B, summarizes the significant and politically sensitive events and issues which resulted in adverse publicity for the Navy. Appendix C, Figure 1, displays the IBM-compatible network configuration after the installation of the Amdahl 5990-500 computer.

C. SUMMARY

This chapter described the controversial turn of events surrounding the NPS mainframe procurement. As noted, there were a great number of distractions which occurred between the time of protest and final procurement which possibly could have influenced decisions of top-level Navy management with regard to handling the issues surrounding this case. The next chapter contains the case analysis and is intended to facilitate the formulation of teaching notes.

V. CASE ANALYSIS

A. INTRODUCTION

The case study presented in chapter four covered the details of the NPS mainframe procurement. In this chapter, the procurement and protest are analyzed. The personal view of the author is presented in a manner which is intended to stimulate the analytical thinking of the reader and to facilitate the development of future teaching notes.

B. CASE ANALYSIS

The protest of the NPS mainframe computer procurement was not such an extraordinary case that it deserved the publicity that it received. Early in 1989, significant press attention was focused on allegations that Federal agencies were improperly and unfairly structuring major computer procurements to favor the products and services offered by the IBM Corporation [Ref. 4:p. 6]. The heightened interest was keyed by the "Gang of Six" in their 17 November 1988 letter to Secretary of Defense Carlucci. While not part of the "Gang of Six" complaint, NPS was not the only agency to be drawn into the IBM bias quagmire. The NPS procurement was "special" because it was the first Navy IBM plug-compatible procurement to occur after the publicized IBM bias letter was sent to Secretary of Defense. There is significant evidence to

suggest that the NPS acquisition was used by the vendors as another example of alleged IBM bias. For example, Sid Wilson, vice-president of PacifiCorp Capital Inc. Systems Integration Division said the protest is part of his company's efforts to educate the Navy about procurement abuses and resolve the problem. In the 4 May 1989 issue of the Washington Post, Wilson was cited to say that "We're pleased. It's significant because it's recognition that bias does exist and that certainly this particular procurement needs to be cleaned up to comply with the requirements of full and open competition." Recall that it was PacifiCorp Capital, Inc. who represented the "Gang of Six" in their GSBCA protest against IBM.

There were other DoD agencies involved in IBM plug-compatible procurements awarded in recent years that also came under fire in 1989 for alleged IBM preference. The Naval Construction Battalion in Port Hueneme, Ca, the Enlisted Personnel Management Center (EPMAC) in New Orleans, La, the Navy Accounting and Finance Center (NAFC) in Cleveland, Ca, the Naval Military Personnel Command (NMPC) in Washington DC, and the Naval Data Automation Command (NAVDAC) in Washington DC are all examples. NAFC, NMPC, and NAVDAC were cited by the "Gang of Six" in their November 1988 letter to SecDef Carlucci as having alleged bias for IBM. Ironically, the dollar value of the NPS procurement was significantly less than the dollar values of the other procurements cited in the "Gang of Six" letter to Secretary of Defense.

In the NPS RFP, IBM prejudice was asserted by the protestor in several areas as delineated in Appendix F. PacifiCorp Capital, Inc. also alleged that an unethical relationship existed between IBM and certain faculty members of the Computer Science Department at NPS in which funds were solicited from IBM in 1986 to support the school's activities. The funds were used to defray the administrative costs associated with a professional workshop and official conference of NPS. One of the individuals involved had been an IBM employee for more than 20 years and had a consulting contract with IBM some years before. Typical expenditures from the fund were for departmental expenses related to seminar speakers, support for planning subsequent meetings, and printing of publications. Between 1986 and 1988, someone placed a hotline call to report fraud, waste, and abuse with regard to the handling of the funds. This was highly publicized in the press. In 1988, the Navy's Inspector General (IG) came to NPS and investigated the matter concerning the workshop funds. The IG found that the fund was not being maintained in strict accordance with Executive Order 11222 and several instructions promulgated by the Secretary of the Navy were found to have been violated. However, the IG found no evidence of criminal activity. This was not reported by the press.

As a result of protest allegations by PacifiCorp Capital, Inc. stating that NPS had displayed bias towards IBM by virtue

of maintaining the workshop funds, the IG conducted a second independent investigation to see if there was any relationship between NPS and IBM that could have influenced the mainframe procurement in any way. The IG report of 1989 concluded that the actions of the personnel involved in the workshop fund had absolutely no bearing on the NPS procurement. The foregoing is an example of the political grandstanding used by a protester to bring into play irrelevant events which eventually were used to further cloud the prevailing atmosphere in the mainframe procurement.

In reality, the program manager (PM) and the procurement technical team had no idea that solicitation of funds from IBM had taken place and furthermore, had no idea that the Navy IG was called in to investigate the workshop fund matter prior to initiating the mainframe computer procurement. For the PM and the procurement technical team, the whole situation was a case of bad publicity.

Publicity associated with this protest continued. The handling of the incorrectly faxed memo by the Navy lawyer handling the case was unethical, if not illegal. The message was privileged communication, lawyer to lawyer. As such it should not have been presented to the protestor PacifiCorp Capital, Inc., who in turn made it public by giving it to the press. It was an example of an honest mistake on the part of the Navy legal counsel made into a public affair. It is obvious that this matter could have been handled

professionally and in a different way. The bottom line is that the error provided the protester more political leverage in the case.

One problem faced by the NPS was that it could not cost-effectively measure its future requirements. One of the most effective ways to predict future throughput and to estimate requirements is to develop and use a benchmark tailored to the needs of the institution. A benchmark consists of running a known portion of the workload which is representative of the entire workload on the proposed equipment. The data package includes a mix of benchmark programs, data and output results. The benchmark must be repeatable and should be independent of the system on which it is run. It is provided to those vendors who specifically request the benchmark package and it assists in judging the scale and complexity of equipment and software necessary to process the user's workload.

Benchmark development is a long and costly process which may contain subjective and controversial specifications. Correct benchmark establishment is not simply an extrapolation of current levels into the future. Extrapolation or casual estimation results in the delineation of non-functional, unsubstantiated specification requirements. As stated previously, NPS had a difficulty in developing a benchmark which would represent the future workload of the users.

The specification requirements, as initially drafted, were not designed to give IBM an advantage, but to provide the NPS

with the "best-value" procurement available. "Best-value" is the term requesting agencies assign to the product which contains added requirement factors which are of the greatest value to the overall procurement. For example, vendor-provided service and maintenance, company reputation and longevity, vendor experience, customer support, and the vendor's relationships with other companies which lead to customer benefits are all critical "best-value" factors which enhance the position of an ADPE vendor. Each of these categories is assigned a weight and the final analysis of the total weights aids in the decision-making process for selecting the winning offer. However, in practice, the Navy does not follow "best-value" strategies t› the extent where maximum benefits for each tax dollar spent can be obtained. This is due to the fact that "best-value" procurement specifications contain a higher degree of subjectivity and are prime targets for protests by commercial vendors. If the "best-value" philosophy is adopted, it appears that there will always be an unhappy vendor who is unable to compete economically.

The major advantage of adopting the "best-value" philosophy is that in the short run, the Navy gets state-of-the-art equipment and in the long run is able to have updates effected upon system hardware, software, and possibly firmware. A major disadvantage to the "best-value" philosophy is that it costs more to produce and deliver the best product

available. Navy ADPE procurements, like most other federal acquisitions, are too often based solely on price which incorporates least common denominator requirements. Federal procurement regulations, CICA, and GSBCA all provide incentives for vendors to scream "foul" when they believe they have been blocked from competition. In federal ADPE procurements,the total tax dollars spent most frequently is the bottom line. In private industrial procurements, the life cycle opportunity best suiting the needs of the organization is the one pursued by top-level management. These institutions have a different philosophy from the federal Government. They will not buy a product simply because it is the cheapest model available and for which the needs and requirements of the organization can be "manipulated" to meet the performance standards of the "least cost" machine. Private industry will procure the machine which best fits its needs and organizational requirements.

Certain federal agencies responsible for the review of the NPS procurement, after the protest to the GSBCA, concluded that NPS and the PM were the main reasons why the protest surfaced. They alleged the PM and the technical procurement team were not following what was going on in the mainframe computer industry. However, the author learned through research and several interviews that the PM for the procurement was very experienced with many aspects of procuring a mainframe computer, having headed up the previous

procurements in 1967 and 1980. He had 35 plus years experience in the computer business. He was aware of the inquiry and investigation ongoing in the federal Government aimed at probing procurements for signs of IBM bias. This included the high visibility investigations being conducted by the Government Accounting Office (GAO), House Subcommittee on Legislation and National Security, the House Armed Services Committee (HASC), and the DoN ADP AAP.

The PacifiCorp Capital, Inc. protest may have been politically motivated to some degree in that it offered an opportunity for IBM competitors to bring the IBM-bias allegation back onto the front pages of the press. It cannot be proven that the NPS deliberately attempted to bias the specifications in favor of IBM. However, according to the DoN ADP AAP, there were requirement specifications cited in the RFP which were not functional and were not substantiated with adequate documentation. A representative from the DoN ADP AAP stated that by specifying MIPS and MFLOPS, NPS failed to provide industry with information regarding the true needs of the agency and future computer throughput [Ref. 4]. He added that the original requirements analysis was not well defined and did not reflect the agency's needs [Ref. 4]. It was further stated that the benchmark did not accurately correlate with the requirements analysis [Ref. 4]. One industry source believes that the development of a dialogue by PacifiCorp Capital, Inc. and NPS could have easily dismissed any

confusion with regard to the school's needs and problems with the requirements analysis and benchmark may have been solved without intervention from the GSBCA [Ref. 2].

It is believed that the managers at NPS were familiar with the current trends in the federal ADPE procurement arena with regard to restrictive specifications and protests and attempted to avoid the pitfalls experienced by other federal agencies. Several years prior to the NPS protest an agency could write what could be construed as "preferenced specifications" and a protest would likely not have developed. Perhaps if the managers at NPS insisted that NRCC send the draft RFP to industry for comment, the protest by PacifiCorp Capital, Inc. may have been averted. Any specification which the vendor did not agree with could have been reviewed and changed if possible.

In the author's opinion politics were a factor in the NPS case. At the time of the NPS protest, a great deal of political pressure was been placed on the Navy to get matters surrounding IBM plug-compatibles squared away. The DoN ADP AAP was being pressured into accepting the position of the IBM competitors since they had the attention of the Congress. The protestor's true agenda was to use the existing political climate to their advantage. The protestor felt that any specification which would provide the requesting agency the best product and newest technology favored IBM as the leader in the mainframe marketplace and put all other competitors at

a disadvantage. The strategy of the protestor was to attempt to get such specifications removed from the RFP. If a protestor is successful in getting such specifications removed, then they stand a better chance of the award due to the fact that once technology is old, it is cheaper to buy.

Attention should also be directed to the background of the IBM competitors. It is likely only three IBM plug-compatible companies will remain in existence by the year 2000. They are Fujitsu, Hitachi, and IBM. It is the author's belief that protests, such as the one faced by NPS, are a strategy of the industry to gain more of a share of the mainframe marketplace. PacifiCorp Capital, Inc. is a systems integrator who bids Amdahl products almost solely. Fujitsu owns approximately 48% of the stock value in Amdahl. It appears as though the Japanese companies are attempting to erode IBM's edge in the mainframe business.

At the time of the NPS procurement, the Navy also had a public affairs image that required restoration. Not only was the "Gang of Six" issue close at hand, but, as mentioned in this case, there were a series of unrelated Navy mishaps and accidents which occurred in the April/May 1989 time frame. There was the explosion in one of the 16-inch gun turrets aboard the battleship Iowa, a fire in the engineroom of the combat supply ship White Plains, and an explosion and fire aboard the aircraft carrier America just to name a few of the incidents. The last thing that the Navy wanted was additional

adverse publicity--i.e., the ongoing controversy surrounding IBM plug-compatible mainframes. As a result, the Navy was likely motivated to some degree, to settle the protest. This required the school to change any specification requirement which could be construed in the slightest way to give any one competitor an advantage.

In earlier years, including the days of the NPS procurement of the IBM 370, there was more money available for ADPE procurements. Today, things have changed. Even though information processing demands are much greater, there is even less money provided for ADPE. As a result, vicious fights have taken place politically, legally and financially amongst the civilian vendors in the IBM plug-compatible arena to attempt to level the playing field. It now appears that a level playing field means that there can be no requirements established by the requesting agency to obtain "best-value" equipment and therefore the contract award will always go to the lowest bidder.

A basic fact of the entire ADP procurement process is that protests appear to have become a way of life for the competitors in the industry. In past years, losing a mainframe award was frequently not a big item of contention. If an award was lost, industries automatically took for granted that there would be other opportunities to counteract the disappointment of not being awarded a specific contract. However, with today's diminishing defense dollars and

restrictive budgets, the protests have led to bitter competition by IBM plug-compatible manufacturers who want to maintain or increase their slice of a shrinking budget pie. Companies often feel that if they can win a protest by appealing to the GSBCA, they will do so. It is often apparent to them that they can either win the case at the GSBCA or at least have legal costs paid by the defendant agencies or award-winning firms. Often times, computer industry firms have to provide legal counsel to defend the rights of the federal Government in a protest because of the fear of some companies that the federal Government does not possess an adequate amount of legal expertise to maintain and defend a previously awarded contract.

Another cause of the intense competition in the mainframe domain has been the proliferation of microcomputers. It has been stated by VADM Jerry O. Tuttle, Director of Space, Command and Control (OP-094) in the Office of the CNO, that the Navy is looking forward to placing more emphasis on the use of microcomputers in the near future. VADM Tuttle inferred the decreasing role of mainframe computers in his keynote address at the Navy Micro 1990 conference in San Diego in July of 1990. He said "Micros are where the action is in the computer business." Pointing out that a Compaq Computer Corp. file server based on the Intel 80486 chip has the same processing power as an IBM 4381 that up to a few years ago ran the entire active duty Navy payroll. [Ref. 14:p. 8]

VADM Tuttle also pointed out that the industries recognize the growing trend towards microcomputers and their desirability. Therefore, there may be fewer mainframe computer procurements in the years ahead. By showing the published difference between the mainframe industry's leading journal DATAMATION which has 128 numbered pages and PC MAGAZINE which is a bi-weekly publication which had 458 numbered pages, VADM Tuttle was quick to ask the question "Is there any doubt where this business is headed?"

The Navy is not the only federal agency to feel the need to take advantage of current trends in the computer industry. The Army is currently moving much of its computing from IBM mainframes operating in the batch mode to a distributed processing, open-systems environment with personal computers carrying much of the load [Ref. 14:p. 9]. The Army plans to cut sharply the number of applications running on about 134 million lines of code, 90 percent of which are run on IBM mainframes. The Army's Sustaining Base Information System (SBIS) has the key goal of developing applications that can run on personal computers [Ref. 14:p. 9]. In view of these bjectives, the mainframe suppliers continue to develop very aggressive strategies that make assertive attempts at landing contracts and awards in the mainframe arena.

Movement away from the mainframe environment is also apparent in the Air Force and at NASA. Combined with the Navy and Army, these four agencies comprise over 70 percent of the

mainframe industry's market to the federal Government [Ref. 15:p. 102]. Due to the shrinking market, it can be understood why the mainframe procurement protests are so critical and also why a non-IBM loser would be inclined to appeal the protest to the GSBCA.

The next ten years is a period many of the leading mainframe firms feel will be critical for survival. A reliable, unidentified industry source representing a major systems integrator provided this bleak prognosis for the competitors in the mainframe arena by stating that "Only three of today's major companies will be viable in the year 2000. These companies will be Hitachi, Fujitsu, and IBM--the leader in the 370/390 architecture arena." One can now see why it is so important for IBM competitors to wrestle as much of the opportunity for Navy mainframe procurements away from the Armonk, New York based firm over the next few years.

C. NPS MAINFRAME PROCUREMENT PROBLEMS-DIFFERENT VIEWS

Representatives from several federal agencies were asked for their opinion as to what were some of the problems in the NPS procurement. The various offices include the DoN ADP AAP, FEDSIM, GSA, and NAVAIRDEVCEN. Each of the problem perspectives are reflective of the particular agency presenting them. These agencies also provided insight into some of the more chronic problems facing the federal Government with regard to ADPE acquisition.

1. **From the DoN ADP AAP perspective**:

- There is an urgent need to develop quality specifications that reflect minimum functional requirements. Requiring activities do not continuously procure ADP systems, especially mid to large ADP systems. As a result, personnel developing an organization's ADP requirements package lack expertise needed to prepare quality specifications.

- There is no vehicle for procuring activities and contracting officers to have technical specifications reviewed by Government specialists in an effort to preclude releasing restrictive specifications.

- There is poor planning and unsatisfactory execution of these plans by the federal agencies when attempting to procure ADPE.

- Effective dialogue with industry had not been conducted.

- High-level DoN/Industry roundtable discussions with regards to problems, perceptions, and potential improvements do not exist.

2. **From the FEDSIM perspective**:

- Procurements in the federal Government change constantly as do the strategies that guide these procurements due to a number of factors like technology available, money available, politics involved, etc.

- The NPS procurement requirement analysis stipulated interactive and batch-processing workloads while the benchmark consisted of scientific and engineering computational tasks.

- NPS procurement arrived during a bad time. The "Gang of Six" procurement was still fresh in the minds of people.

3. **From the GSA perspective**:

- Agencies like the NPS procure ADPE infrequently. It is very difficult to perform a good procurement when an agency only does it as infrequently as the NPS. The

industry is constantly changing and capabilities are always being advanced.

- Agencies must get involved in assisting in the planning of their procurements. Help is needed in the planning phases at the agency level.

- The federal Government needs to spend more money training and assisting decentralized agencies like the NPS in the major areas of ADPE acquisition.

4. From NAVAIRDEVCEN perspective:

- In the Navy, ADPE procurements are not well defined and understood. There is not enough emphasis on requirements analysis in the beginning of the procurement process. The requirements analysis submitted by the NPS was not well defined and did not delineate what was required and sought in the procurement. A key action on behalf of NPS was that the requirements analysis was completely redone after the protest to remove all signs of vendor preference and to make the requirements analysis more defendable.

- Most people who do perform procurements, do it so infrequently that they are inexperienced and unfamiliar.

- There was more money available in the past for ADPE acquisition. In today's budget cutbacks, money is scarce and everyone is trying to get his market share. This is a reason that protests are much more prevalent these days.

- NPS had extremely bad timing with the "Gang of Six" protest that had recently been brought to light.

D. SUMMARY

In this chapter, an indepth analysis was made of the overall NPS mainframe procurement. The views presented were those of the author and the perspectives of individuals representing agencies of the federal Government. Problems believed to have exacerbated the protest were delineated. In

the next chapter, lessons learned from the NPS procurement are discussed.

VI. LESSONS LEARNED

A. INTRODUCTION

As stated previously, protests in the procurement of major ADPE are becoming more common everyday. Similar mainframe procurement protests, coupled with the protest of the NPS procurement, has provided a wealth of experience and a number of lessons learned. These lessons were collected and a synopsis was created from research performed and interviews conducted with key Government and civilian sector officials. Inputs received from ADPSO, DoN ADP AAP, DONIRM, GSA, NPS, and NRCC have been presented in bullet format. They will prove to be valuable to anyone involved in the IBM plug-compatible mainframe acquisition business.

B. CASE LESSONS LEARNED

The following lessons learned are organized by Government activity.

1. From the ADPSO perspective:

- The NPS mainframe procurement was an ADPSO success story. This procurement took a little over two and one-half months from time of RFP release to award. ADPSO normally takes nine months to one year from release of RFP to award. By the same token, the time limitations were a problem factor in and of themselves. There was not the time available to create a comprehensive benchmark that tested the full NPS mixed interactive and batch-processing workload. This lack of a complex benchmark caused one vendor to question the Navy. Along with their proposal

PacifiCorp Capital, Inc. delivered a protest (a letter from Cohen & White) which they wished to be considered if they did not get the award. PacifiCorp Capital, Inc. felt that IBM may have been able to offer a processor below the capacity needed at the NPS but which could pass the benchmark. Actually this did not occur and all of the offers were in the capacity range needed at the NPS and the award to PacifiCorp Capital offering Amdahl equipment went unprotested. The major lesson learned by ADPSO was that in the future, a more comprehensive benchmark would be appropriate and that the full requirement could be tested.

- Though vendors were cautioned with a contractual clause in Section M (Evaluation for Award) of both the protested and final RFPs stipulating that the Government reserved the right to award the contract based solely on proposal evaluation and without discussion, ADPSO's procurement strategy proved to be better than NRCC. The DoD FAR 52.215-16 (Contract Award) subsection (c) delineates authorization for clause regarding awarding contract without discussion. The key to ADPSO's success was the timely release of the draft RFP along with the requirements analysis and proposed benchmark released to industry for comment in accordance with the settlement agreement. The comments from vendors were reviewed and implemented into the final RFP. Since the NPS RFP received so much attention and "grooming", there was no dispute by vendors over its contents and therefore the time elapsed from RFP release to award was extremely short. With this strategy, ADPSO was able to satisfy vendors who wanted the specifications written in a fair manner.

2. **From the DoN ADP AAP perspective**:

- In the past, what the Government lost in awarding contracts based on unnecessarily restrictive requirements was not the value of the contracts themselves, but whatever opportunity may have existed to achieve lower prices in those cases through greater competition.

3. **From the DONIRM perspective**:

- Serious mistakes were made in the past. Lower level Navy acquisition officials tried to short-circuit contracting procedures by unfairly tailoring specifications to benefit IBM products. "There is a natural tendency for [management] to stick with the system they've got." [Ref. 11:p. 18]

- The DoN estimates that some 15,000 man-hours and more than $500,000 was expended responding to the Congress and to protest issues regarding IBM bias.

4. **From the GSA perspective**:

- Be prepared for a protest the day the procurement is initiated. Assume that your procurement will be protested in some fashion, shape, or form. There is no such thing as a completely fool-proof acquisition and each procurement is unique. The days of copious amounts of federal dollars available for the acquisition of ADP equipment are gone forever. Protests are now a way of life and the bigger the contract, the greater the risk for protest.

- Prepare your legal counsel attorneys for the case after ensuring that they have litigation experience and a technical background. Keep in mind that the organization initiating the protest will have highly proficient, professional lawyers handling their case. These lawyers execute the legal aspects of procurement protests for a living. They are professional and competent. Do not expect anything less of their capabilities.

- Attorneys employed by the federal Government generally do not have the experience advantage enjoyed by the computer industry's legal counsels. This means that chances are high that the federal Government will become the losers in a GSBCA case.

- Spend time getting organized and devise a well organized method for dealing with the large volumes of paper that will be handled by the agency seeking procurement.

- Establish a meticulous filing plan and a system for discarding documents that are no longer needed by the

requesting agency. As is true in any Government inspection remains true here; if you possess something which the inspector can see, it is vulnerable to scrutiny.

- Have legal counsel attorneys prepare you for giving depositions and trial testimony. Answers to likely questions must be rehearsed until they are committed to memory.

- Become proficient at understanding the language of the protests. Common English language terms do not necessarily mean what you think when used in a cleverly devised legal document.

- Work together as a team and support one another. During a protest is not the time to become unraveled or to begin acting selfishly. Keep in mind that soon after the onset of the protest all team members will begin to feel the effects of the litigation.

5. **From the NPS perspective**:

- The procurement technical team must fully understand and appreciate that undertaking a procurement task of $10-14 million will be time consuming, exhausting, and require extreme amounts of consistent effort. A large proportion of the time will be expended while attempting to gather corroborative data which will be used to support official documentation such as the benchmark and requirements analysis. The corroborative data comes in terms of testimony from knowledgeable users. The school's workload would change dramatically to take advantage of the major increase in computer processing power and storage capacity. Running present programs would not be representative of expected future loads.

- Write the requirements analysis, all memorandums, letters, and other official documentation as though you were writing it to be scrutinized by a judge. It is very likely that this could be true if the procurement is protested. The protestor in the mainframe procurement made no attempt to go to the contracting office or GSA prior to going to the GSBCA. They could have requested guidance from FEDSIM but they chose to protest immediately.

- Benchmark requirements must be directly related to the requirements analysis with little or no differential in the intended interpretation. All requirements must be delineated clearly in both of these documents which are key to the procurement. NPS benchmarked scientific and engineering applications in a research environment.

- In accordance with federal instructions and regulations, procuring agencies are required to submit documents such as the Mission Element Needs Statement (MENS), Abbreviated Systems Decision Paper (ASDP), Requirements Analysis (RA), and Software Conversion (SWC) study up the chain of command for proper review and staffing. When the NPS protest came to light, all the upper echelon bureaus acted as if they were surprised at the situation and as if they themselves had not reviewed the documentation and passed it on. When asked why they were behaving in such a manner, these same agencies replied in a manner to suggest, "If we had known the requirements read that way we would have held them up." They ran for cover and left us out there all alone to fight for ourselves.

6. **From the NRCC perspective**:

- Agencies should not depend on the NRCC to be a source of extended technical assistance. They are undermanned and the technical expertise of the contracting staffs is very limited. They rely heavily on the ability of the requesting agency to specify written requirements correctly and unrestrictively thus ensuring full and open competition. This is especially true with regard to the critical sections of the RFP (sections C, L, and M) which warrant meticulous attention to detail by the requesting agency.

VII. CASE CONCLUSIONS AND RECOMMENDATIONS

A. CONCLUSIONS

This case study of the NPS mainframe procurement presented a real life example of ADPE procurement and demonstrated how time consuming and complex a process it can be. The procurement was presented in case study format and an analysis was provided. Lessons learned in this procurement case were also provided.

Technological changes in software, hardware, and firmware have resulted in complex ADPE solicitations. They have caused an increase in the number and complexity of rules, regulations, and instructions associated with the procurement of ADPE. From the instant that a decision is made to automate or make major system revisions, the Navy's ADPE procurement process becomes a maze of rigid controls and regulations. The end result is a time consuming, inefficient, and less than effective process.

The Navy's procurement process is far from being flawless. Confusion results due to misunderstanding of the existing regulations. First, a person assigned to procure a unit of major ADPE may do so only once in a career. This leads to personnel unfamiliar with the current trends in an ever-changing procurement system. In this case, the PM's

experience was well above the average. This being his third major ADPE procurement he quickly learned that the regulations and trends had changed.

Secondly, many of the people working in the area of ADPE procurement, at both the requesting agency and contracting level, lack technical understanding of system functionality and knowledge regarding the federal ADPE acquisition and budget process.

Third, the documentation used by agencies is not standard throughout the federal Government and therefore uncontrollable disparities in procurement actions continue to be a matter of serious concern. A consolidated effort should be made to develop a single system of instructions which pertain to all phases of the Navy ADPE acquisition process, making them more concise, logical, and easier to read. A "how-to" manual or other document delineating the steps and approvals needed in the acquisition of ADPE would be extremely beneficial to agencies not fully comprehending their responsibilities in the procurement process.

Fourth, today's budget dollars are scarce. There is not enough money to go around to facilitate properly conducted and researched studies that fully investigate and substantiate the requirements that a requesting agency may have. ADPE procurement is not a support function for Navy enterprises. The role ADPE plays in the Navy far exceeds the casual concept of being merely a support function. In most cases, ADPE is

the major reason for the existence of certain Governmental organizations and entities such as the DoN's Office of Information Resources Management. As long as the federal Government views its role as one of promoting competition within the computer industry, emphasis by vendors protesting ADPE procurements are bound to continue.

The Navy would benefit tremendously from a pilot training program for those individuals responsible for correctly executing the procurement process for ADPE. Such a training program should be mandatory for procurement experts and computer project managers directly involved in the overall process.

This thesis attempted to present the facts surrounding the NPS mainframe procurement so that the reader would be able to see that the PacifiCorp Capital, Inc. protest was virtually unnecessary. All disputed issues could have been resolved via negotiation with NPS and the respective contracting office, NRCC Detachment Long Beach.

B. LIMITATIONS OF THE STUDY

This case study dealt with only one of many troubled IBM plug-compatible procurements in the DoN. The conclusions reached in this thesis are therefore limited and are the views of the author. The perspectives of other individuals representing key federal agencies responsible for ADPE procurement were also presented. The overall case presented

in this thesis is only a small version of the grand scheme of problems present in the DoN ADP infrastructure.

C. RECOMMENDATIONS FOR FUTURE RESEARCH

In conducting this research, evidence was uncovered that indicates problems exist in the DoD and in other branches and agencies of the federal Government with regard to IBM bias in the plug-compatible mainframe arena. Future research in analyzing DoD or federal IBM plug-compatible mainframe procurements using case study methodology is highly recommended.

D. CASE RECOMMENDATIONS

The following recommendations are organized by Government activity. Several agencies provided recommendations with regard to federal ADPE procurements. These various offices include ADPSO, DoN ADP AAP, and the Office of Secretary of the Air Force (SecAF), Office of General Counsel (Procurement).

1. From the ADPSO perspective:

Users should and are required to survey the marketplace to determine the competition available. If there is limited competition, ensure that the requirement is a true need. If the requirement can only be fulfilled by one vendor, justify sole source and buy accordingly. There is no way to always avoid protests. But a thorough examination of a user's true requirements and a market survey help tremendously.

2. **From the DoN ADP AAP perspective:**

In order to minimize the risks of writing restrictive specifications, requiring agencies should allow the GSA FEDSIM Center and the experts who work in the area of ADPE acquisitions the opportunity to provide independent specification consultation and to review the critical procurement documents such as the MENS, requirements analysis, alternative analyses, feasibility studies, cost/benefit analysis, systems decision papers, benchmark technique criteria, draft RFPs, acquisition plans and strategies, and proposal evaluations for correctness and completeness. FEDSIM will review these documents, point out potentially restrictive aspects, and advise the activity on appropriate revisions to enhance competition. Requiring activities will be expected to reimburse the GSA for services rendered.

Functional specifications need to be reflected in the requirements. MIPS and MFLOPS do not specify functional requirements. Functional requirements must be documented, substantiated, and verified. Agencies must understand that the bigger the contract, the greater the risk for protest. Therefore, requirements and specifications must be completely defined.

Take full advantage of marketplace capabilities by improving planning and execution of ADP acquisitions. An improved dialogue with industry should be developed. In 1988, the "Gang of Six" vendors complained to SecDef Carlucci that

the Navy's procurement of the Inventory Control Points (ICP) system and the Stock Point ADP Replacement (SPAR) program of 1984 and 1987 respectively, were IBM biased procurements. The ICP procurement was worth $447.9 million and the SPAR procurement was a 12-year contract worth $543.4 million. However, the DoN ADP AAP speaks highly for NAVSUP in that they made good use of the draft RFP and feedback received from specification review conferences with industry. The ICP and SPAR procurements came under scrutiny by the House Subcommittee for Legislation and National Security during their 1989-1990 hearings but was cleared of any malfeasance.

3. **From the DONIRM perspective**:

Do not slant the specifications towards any one vendor. Keep the playing field level by having specifications technically reviewed to ensure non-bias, non-restrictive, requirements. Any requirement specification which appears to give any vendor an advantage or the upper hand in a procurement should be thrown out.

Do not underestimate the power of politics. The action of faculty members at NPS maintaining professional relationships and contact with IBM (which were entirely appropriate in an academic institution) was a case of a situation blown out of proportion especially so since it had no bearing on the procurement of the mainframe.

4. **From the FEDSIM perspective**:

Ensure that requirement analysis and benchmark criteria are compatible. In the NPS procurement, the requirements analysis stipulated both interactive and batch-processing work. The benchmark tests placed emphasis on the need to prove capabilities to execute scientific and engineering computation tasks.

With regard to ADPE procurement, Navy agencies receive different input from Congress, GAO, GSA, and DoD. Therefore, agencies must try their best to keep the playing fields level, specify their requirements, and try to keep the procurement as clean as possible.

5. **From the "Gang of Six" perspective**:

Use the draft specification phase to obtain industry comment with the purpose not only of correcting those defects but to promote full and open competition. This could eliminate amendments to the formal RFP. Also the draft RFP should contain everything except boiler plate so that contract structure, evaluation model etc., can be commented on. These are equally important parts of the process.

Perform complete market surveys prior to drafting the initial specifications to insure that all competitors have a chance to compete. There are at most three manufacturers of the major 370 architecture systems. Each should be able to present its products and review the specification for areas

which would make them non-responsive. This should be part of an affirmative effort by Government managers to familiarize themselves with the competitive alternatives.

Procurement personnel should be briefed on the market structure of the ADP industry segment they are dealing with and updated periodically on changes in products and the structure of the marketplace.

Procurement personnel should be encouraged to remain abreast and be briefed on the abuses that users may attempt in the process.

Procurement personnel should be rewarded for identifying abuses (and not be dependent on the users for recognition). A system should be developed in cooperation with the competition advocates.

Vendor comments should be treated more seriously during the procurement process as a source to assist in the identification of abuses. Too often the using activities dismiss valid comments as self serving only.

Procurement organizations should have more authority to modify specifications to promote full and open competition. To accomplish this they need greater technical resources or access to technical resources other than those of the buying activity.

Develop specifications which eliminate all of the abuses enumerated.

ADPSO is the only central selection office within the DoN with a career military officer in command who is routinely rotated out. Either the rotation should be eliminated to insure continuity or the position given to a permanent civilian head.

6. **From the GSA perspective**:

Communicate better with industry and with the federal Government agencies responsible for overseeing ADPE acquisition to ensure that everyone understands requirements and needs. Define requirements up front and do not waiver on them. Therefore, vendors will not feel they are being treated unfairly. This action alone will not prevent protests but it will help to minimize them.

7. **From the NPS perspective**:

This case was highlighted by the political grandstanding of the industry. Certain individuals were instrumental in using opportune situations in their favor and by using the media, politics, and other previous situations such as the "Gang of Six" case as ammunition to draw closer scrutiny to the NPS mainframe buy. Recommend the release of a draft RFP by the contracting office in future mainframe computer procurements. Releasing draft RFPs were not common in procurements until 1990, when it became standard practice by contracting offices in the wake of the "Gang of Six" issue.

8. **From the NRCC perspective**:

Know exactly what the procurement requirement entails, know what kind of specifications are required, and tailor those specifications to your solicitation document. Once this is underway, keep in mind the that competition is a priority (unless sole source) and review the requirements to ensure they promote full and open competition.

After solicitation for procurement has been made public, questions from potential bidders often arise. Requesting agencies should be advised of these questions. Review them thoroughly and provide answers to each potential bidder. Often bidders will ask for clarification of the specifications and they will indeed be found to be in error. If corrections can be made to the specifications prior to the deadline for RFP solicitation, some of the potential problems can be eliminated.

At the beginning of the procurement process, the contracts agent should discuss with the requesting agency, any aspects of the specifications which appear to be ambiguous or questionable.

Each major procurement action should include a team of sufficient size where the technical responsibilities are considerably distributed and thus preclude the potential of overburdening any one individual.

The procurement activities should be checked or audited at predetermined points by an internal review board or

technical and legal panel of the best personnel the requesting agency can muster. This would be an opportunity to attempt to detect and eliminate potential problems that previously went unheeded. It would be cheaper overall to conduct business this way simply because it would save time and money.

9. **From the Office of the Secretary of the Air Force (SecAF), Office of General Counsel (Procurement) perspective**:

Anyone involved in procurements of ADP resources should be intimately familiar with the Brooks Act, the procurement regulations, and the significant GSBCA decisions. [Ref. 12:p. 28]

This thesis presented a detailed case study and analysis which will provide people responsible for ADPE procurement in both the federal Government and in the civilian sector with a view of how the acquisition process may function.

The practice of ADPE procurement in the federal Government is extensive and widespread. The lessons learned and recommendations presented in this thesis will prove to be helpful; however, they are in no way to construed as being thoroughly complete and exhaustive.

APPENDICES

APPENDIX A

A. KEY EVENTS OF NPS MAINFRAME PROCUREMENT

Jul 1985	Plans to acquire new mainframe formulated
May 1986	MENS approved by NMPC (OP-16)
Nov 1987	Analysis of Alternatives and ASDP drafted and submitted
Jan 1988	Analysis of Alternatives and ASDP approved by OP-09BF, NMPC (OP-16), and NAVDAC
18 Mar 1988	DPA received from GSA under case number KMA-88-0202
4 Aug 1988	Draft of the RFP sections C,L, and M delivered to NRCC Long Beach
15 Mar 1989	NPS RFP SD Number N00123-88-R-1013 issued by NRCC
Apr 1989	DoN ADP AAP established to review Navy and Marine Corps solicitations for IBM bias
11 Apr 1989	PacifiCorp Capital, Inc. protested the NPS solicitation
14 Apr 1989	GSBCA suspends NPS mainframe procurement
30 Apr 1989	NRCC legal counsel inadvertently faxed communique to PacifiCorp Capital, Inc. attorneys
11 May 1989	DoN and PacifiCorp Capital, Inc. reached an out of court settlement
12 May 1989	NRCC canceled the NPS solicitation in accordance with settlement agreement
8 Sep 1989	DoN ADP AAP begins review of the NPS mainframe procurement
Nov 1989	ADPSO assigned to handle the NPS follow-on procurement

Mar 1990	NPS procurement project received at ADPSO
6 Apr 1990	Copies of draft RFP, RA, and benchmark released for industry comments
9 May 1990	Industry comments received
13 Jul 1990	Final RFP released
13 Aug 1990	Offers (including technical and cost proposals) received
24 Aug 1990	Ranking of Offers determined
10/11 Sep 1990	Pre-award benchmark testing performed
21 Sep 1990	Mainframe contract awarded to PacifiCorp Capital, Inc. for Amdahl 5990-500 computer
Dec 1990	NPS accepted delivery of Amdahl 5990-500 computer

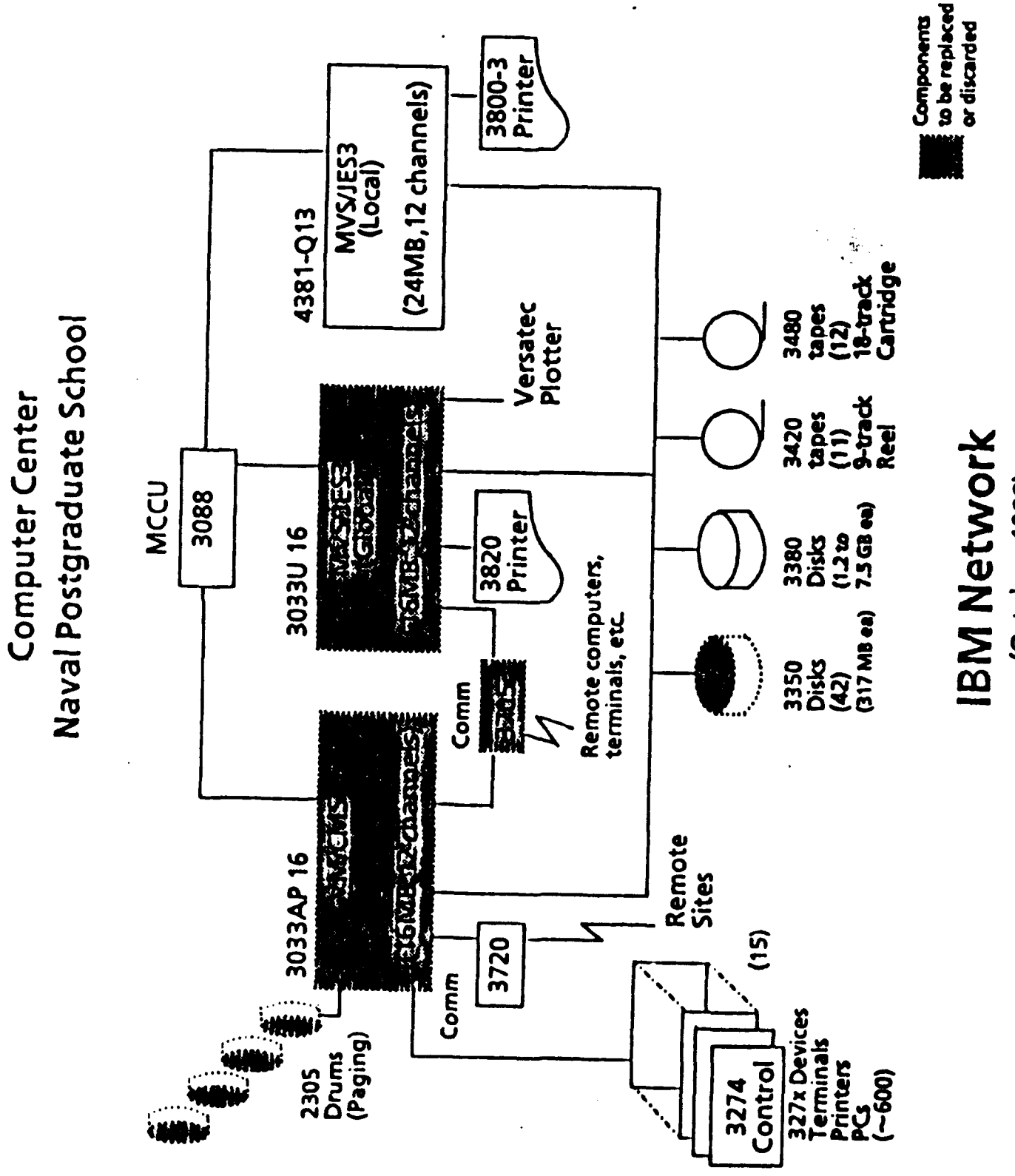
B. POLITICAL ISSUES COMPLICATING PROCUREMENT

1988	Navy IG investigates Computer Science Department incident regarding improper handling of funds donated by IBM.
4 Oct 1988	PacifiCorp Capital, Inc. protests Navy $150 million for DPI-ET Phase III
17 Nov 1988	"Gang of Six" letter delivered to SecDef Carlucci
8 Dec 1988	GSBCA rules in favor of PacifiCorp Capital, Inc. in DPI-ET Phase III case
Feb 1989	House Subcommittee for Legislation and National Security begins IBM bias investigation
Apr 1989	Navy IG investigates NPS for IBM bias based on PacifiCorp Capital, Inc. Letter of Protest to GSBCA.
19 Apr 1988	Explosion in 16-inch gun turret aboard USS Iowa (BB-61) claims lives of 47 sailors

9 May 1989	Fire in engine room aboard USS White Plains (AFS-4) claims the life of six sailors
14 May 1989	Explosion and fire aboard aircraft carrier USS America (CV-66) claims the lives of two crew members
Jul 1989	HASC responds to GAO reports on mismanagement in DoD
May 1990	Navy cancels DPI-ET Phase III solicitation
2 Aug 1990	Iraq invades Kuwait

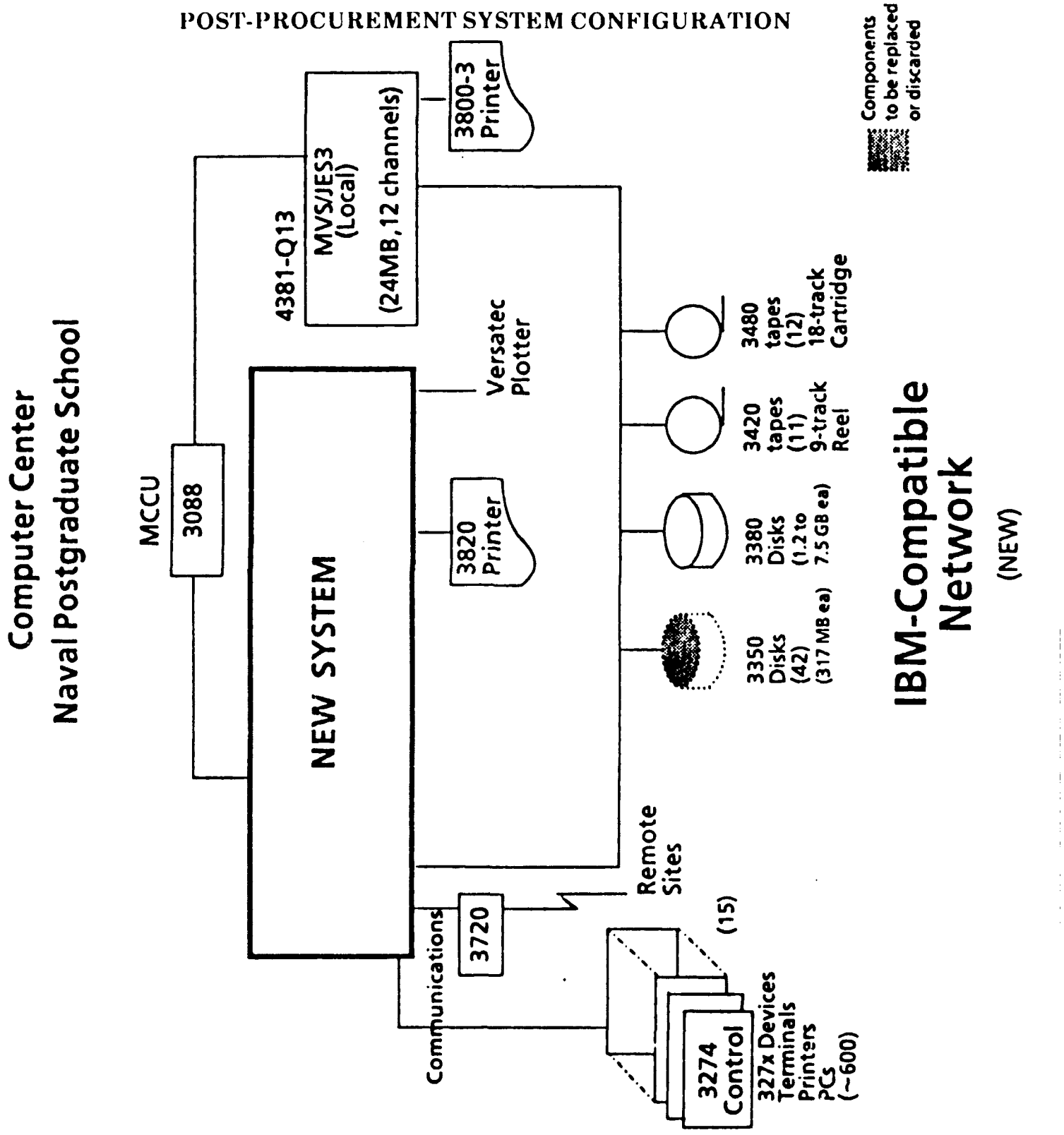
APPENDIX B

SYSTEM CONFIGURATION PRIOR TO 1990 MAINFRAME PROCUREMENT



APPENDIX C

POST-PROCUREMENT SYSTEM CONFIGURATION



APPENDIX D

A. NAVY ADP ACQUISITION PROCESS

The following provides a list of key events and documents in the acquisition process for Navy ADP procurements. A procurement the size of the NPS mainframe computer acquisition (originally estimated at $10-14 million) normally takes one year to be completed. The procurement clock starts from the time the procurement request is submitted to the contracting agency until the time the contract is awarded.

- Procurement Request (PR) including:

  Statement of Work (SOW) and

  Financial Accounting Data (FAD) Sheet
- Procurement Planning Conference (PPC)
- Synopsize in Commerce Business Daily
- Draft Request For Proposal (RFP)
- Discussions with industry vendors
- RFP Release
- Vendor (Contractor) Proposal submission
- Proposal Evaluation (cost and technical)
- Source Selection
- Contractor Award (normally a one year contract)
- Contractor Debrief
- Contract Administration
- Contract Closeout/Termination

A particular procurement process may be accelerated and be completed in less than one year if the following criteria are met:

- discussions between the requesting industry are open and thorough;
- the number of vendors bidding is few;
- a draft RFP is initially submitted to industry for comments;
- evaluations of the proposals are simple and uncontroversial;
- workload of contracting office allows for expeditious processing of proposals.

The procurement process may be delayed for the following reasons:

- protests;
- large number of bidders;
- difficult or complex evaluation process;
- failure to negotiate;
- failure to plan.

As was learned in the case of the NPS mainframe procurement, the time span, after the protest settlement, between procurement request and award to PacifiCorp Capital, Inc. was approximately six months. The accelerated pace of this procurement process was unique in that ADPSO released the

draft RFP, requirements analysis, and proposed benchmark for industry comments and suggestions. ADPSO also provided priority handling of all activities.

APPENDIX E

A. PACIFICORP CAPITAL, INC. LETTER OF PROTEST

GSBCA Solicitation No. N00123-88-R-1013

PacifiCorp Capital, Inc., (PacifiCorp) 1801 Robert Fulton Drive, Third Floor, Reston, Virginia 22091-4347, by its attorneys, hereby protests the award of any contract under the above-captioned solicitation. PacifiCorp is a systems integrator which has submitted numerous bids and proposals in federal ADP procurements, including procurements for IBM compatible hardware and software. The solicitation requests proposals to replace two IBM 3033 mainframe computers. The winning vendor must provide central processing units, software and maintenance. The contract is worth approximately $12-14 million. The procurement is being conducted by the Naval Regional Contracting Center Long Beach on behalf of the Naval Postgraduate School in Monterey which will use the procured computers for instructional, research and other purposes.

This procurement is essentially an IBM sole source disguised as a competitive acquisition. As alleged more fully herein, certain specifications were apparently inserted for the sole purpose of restricting this procurement to IBM. Moreover, the Naval Postgraduate School has displayed a pattern of bias in its acquisition of IBM products. This procurement is the latest result of that bias.

As described in the RFP, the computer facility at Naval Postgraduate School consists primarily of IBM hardware and software. The equipment list contained in the RFP indicates that the Naval Postgraduate School has not acquired any products from the competitors of IBM who manufacture IBM compatible central processors and peripheral storage equipment. The school's clear bias manifested itself recently in a protest filed with this Board involving an RFP containing specifications which restricted IBM compatible vendors from competing. See Storage Technology Corporation, GSBCA No. 8764-P (filed November 12,1986). The case was settled in the protester's favor when the Naval Postgraduate School agreed to remove a restrictive specification. However, the Navy never sent the amendment containing the revised requirement to StorageTek. In the absence of a StorageTek bid, award was made to IBM.

In addition, the pro-IBM bias at the Postgraduate School has led Navy officials to solicit the IBM Corporation for funds to support the school's activities. The funds received from IBM were deposited in an unauthorized account maintained by a foundation especially set up by Navy officials. The monies from IBM were used to support a workshop and other official activities of the Naval Postgraduate School. One of the key Navy officials involved in soliciting money from IBM had previously been an IBM employee for over 20 years. This individual also signed a consulting contract with IBM during the period in which the solicitation and disbursement of IBM funds occurred. Although a subsequent investigation of these activities by the Navy Inspector General did not find any evidence of criminal activity, the Navy IG did find violations of Executive Order 11222 and numerous official instructions issued by the Secretary of the Navy. The IG specifically stated that the Postgraduate School's conduct in connection with a workshop funded by IBM "resulted in or gave the clear appearance of: (a) preferential treatment to IBM..."

The Board must use the full reach of its powers to prevent the bias displayed by the Naval Postgraduate School from irremediably marring the protested procurement. Only drastic relief which includes removing the procurement from the individuals who have directed it to date--can provide any assurance that the Navy will achieve full and open competition for this acquisition.

B. INFORMATION REQUIRED BY Board RULE 7(b)(2)

Rule 7(b)(2)(i): The name of the person signing this protest on behalf of PacifiCorp is David S. Cohen. Mr. Cohen's address is Cohen & White, Suite 504, 1055 Thomas Jefferson Street, N.W., Washington, D.C. 20007, and his telephone number is (202) 342-2550. The fax number for Cohen & White is (202)342-6147.

Rule 7(b)(2)(ii): The number of the protested solicitation is RFP No. N00123-88-R-1013. The date of issuance was on or about March 15, 1989. Proposals were initially due on April 14, 1989. On April 7, 1989, the Navy sent out a mailgram notifying vendors that it would issue Amendment 2 to answer vendor questions regarding the RFP. The closing date was extended to April 28, 1989.

Rule 7(b)(iii): A contract has not been awarded.

Rule 7(b)(iv): The RFP was issued by the Naval Regional Contracting Center Detachment, Long Beach, California 90822-5095. The solicitation number is N00123-88-R-1013. The

contract specialist is Karen Simpson. On information and belief, the contracting officer is Dorothy Rogers. The address for Ms. Simpson and Ms. Rogers is L211B, Naval Regional Contracting Center Detachment, Long Beach, California 90829-5095. The telephone number is (213) 547-7584.

Rule 7(b)(v): The grounds of protest are set forth below.

Rule 7(b)(2)(vi): PacifiCorp's protest is timely filed. This protest challenges the use of restrictive specifications in the above-captioned procurement. It is being filed prior to the time and date for proposal submission. PacifiCorp has not protested this procurement to the General Accounting Office.

Rule 7(b)(2)(vii): A hearing is requested to determine whether procurement authority should be suspended pending the Board's decision on the merits of this protest. A hearing on the merits of the protest is requested.

C. **GROUNDS FOR PROTEST**

1. **The RFP.**

1. The protested procurement is being conducted by the Naval Regional Contracting Center Detachment Long Beach (NRCC Long Beach) on behalf of the Naval Postgraduate School in Monterey, California. The acquired computers will be installed in the Postgraduate School's Computer Center. The Computer Center presently "provides all of the general services computing support for the instructional and research programs of the school, and the data base and management information systems of the major tenant activity, the Defense Manpower Data Center (DMDC)." RFP N00123-88-R-1013 (hereinafter, "RFP") at 4.

2. The Naval Postgraduate School Computer Center presently utilizes IBM hardware and software to provide service for its users. As described in the RFP, "Most of the Center's computing services are provided on a network of IBM mainframe computers-IBM 3033 Model AP16, 3033 U16 and 4381 Q13-connected by an IBM 3088 Multi-System Channel Communications Unit (MCCU)." RFP at 4. The RFP lists the hardware and software presently available at the Center. See RFP at 6,8. With only minor exceptions, all of the hardware and software listed in the RFP are products of the IBM Corporation.

3. The processors procured under the RFP will be used to replace the IBM 3033 Model AP16 and the 3033 U16. The

migration path which the procurement contemplates is set forth on page 97 of the RFP:

Months after Award Equipment

1 INITIAL CONFIGURATION
40 MIPS
128 MB Main Storage
256 MB Extended Storage
32 channels
All software in Schedule B except UNIX

13 **Expansion to
60 MIPS
256 MB main storage
40 channels
UNIX Operating System

25 Expansion to
512 MB expanded storage

37 Expansion to
80 MIPS
512 MB main storage
48 channels

49 Expansion to
1 GB expanded storage

* Coinciding with removal of the IBM 3033 U16
**Coinciding with removal of the IBM 3033 AP16.

4. This migration path will produce a dramatic increase in the processing power available at the Center beginning in Month 1. The combined MIPS (millions of instructions per second) of the present processors installed at the Center is approximately 17. The initial processor which replaces the IBM 3033 U16 must provide at least 40 MIPS. This will produce an immediate increase of approximately 300% in the processing power available at the Computer Center. The RFP does not give any indication as to what, if any, workload studies justify this enormous jump in computer resources.

2. **Restrictive Requirements**

a. The Vector Processor Requirements

5. The RFP also required vendors to propose hardware or software to provide vector processing and/or parallel computation. RFP at 16. Vector processing is a specialized form of data processing which utilizes vectors to perform a large number of mathematical or algebraic computations at high speeds. The RFP allowed vendors to either propose a vector processing element which was integrated into the proposed CPUs or an extremely high performance scalar processor. On information and belief, there is no scalar uniprocessor that could meet the RFP's performance requirements.

6. PacifiCorp is a systems integrator. PacifiCorp does not have a business relationship with IBM which would permit it to bid IBM products for this procurement. The only competitive proposal which PacifiCorp could theoretically make is one that included processors manufactured by Amdahl or by National Advanced System (NAS). Both Amdahl and NAS manufacture or are able to propose vector processors which could meet the Navy's functional requirement.

7. However, the Navy has attempted to exclude both Amdahl and NAS from this procurement by manipulating the vector processor requirements so as to rule out the likely machines which Amdahl and NAS could propose in response to the Navy's requirements.

8. On or about March 16, 1988, representatives of the Amdahl Corporation conducted a briefing for officials of the Naval Postgraduate School. The briefing, which took place approximately one year before the Navy issued the RFP, included a discussion of Amdahl's methods of providing vector processing capability. Amdahl manufactures its own line of vector processors which operate under the IBM MVS/XA operating system. This line of processors does not operate under the IBM VM operating system. The protested RFP requires VM/XA support, and effectively prohibits Amdahl from bidding its own vector processor.

9. Amdahl has also supplied vector or array processors manufactured by other corporations in response to customer needs for high speed, complex processing. These vector processors are connected to the Amdahl central processing unit through one of the channels in the Amdahl CPU.

10. At the March meeting, Amdahl representatives explained that these channel attached vector processors

operated in a manner that was transparent to the user. Amdahl also explained to the Navy that it does not offer integrated vector facilities which operate under scalar processors; that is, all of the vector processing proposed by Amdahl consists of channel attached vector processors or independent vector processors with only modest scalar capability.

11. On information and belief, the Navy used the information conveyed at the March, 1988 briefing to develop specifications which would exclude Amdahl from the procurement. As finally issued, the RFP stated that the vector processing requirement, "cannot be satisfied by a vector/array processor, channel attached to the basic system proposed to satisfy Hardware Requirements." RFP at 16.

12. On information and belief, the primary purpose of the prohibition against channel attached vector processors was to exclude Amdahl from this competition. Further, on information and belief, the requirement directly resulted from the pro-IBM bias of the Naval Postgraduate School personnel. There is no rational basis for prohibiting channel attached processors. Indeed, as late as October, 1988, the Naval Postgraduate School had advertised a procurement for data processing resources, which included among other items, a network attached vector processor. The procurement is currently on hold.

13. The RFP's vector processing requirements also included a provision regarding the speed of the proposed vector processor. The RFP contained a performance requirement that adopted a standard test for measuring performance of scientific processors. The results are expressed in MFLOPS, that is, millions of floating point operations per second. The RFP stated:

> Regardless of the method of attainment, the resulting high-performance computational power must be a minimum of 30 MFLOPS per processor when performing the LINPACK 300 Test, i.e., full (64-bit) precision test with matrix-vector operations in all FORTRAN (non-coded BLAS) with no compiler directives, for a matrix of order 300 (Reference: I. Dongarra, Performance of Various Computers Using Standard Linear Equations Software in a FORTRAN Environment, Argonne National Lab., Tech. Memo. No. 23, 1 August 1988 or later). See Section H for further information.
>
> RFP at 17.

14. Section H embellished the basic requirement on page 17 of the RFP by referring offerors specifically to Table 5 of the Argonne National Lab test reports:

> To establish a given processor's power in terms of MFLOPS, the Navy will accept either (a) the rating published in Table 5 of the report by Jack Dongarra, Performance of Various Commuters Using Standard Linear Equations Software in a F0RTRAN Environment, Tech. Memo 13, Argonne National Laboratory, latest issue, or (b) documentation of actual runs on the proposed processor(s) of the LINPACK 300 case conducted by the offerors, subject to verification/validation by Government staff. Documentation must conform to the requirements of Section C.
>
> RFP at 59-60.

15. The most recent version of the referenced Argonne National Laboratories Test is dated January 29, 1988. Table 5 contains the results of tests conducted on numerous machines. Many of those test results do not satisfy the RFP's mandatory requirement because they were achieved using software routines that are prohibited by the RFP. For example, one of the ratings for the NAS EX 60 exceeds the solicitation's 30 MFLOPS requirement, but that particular rating cannot be considered because it was produced using coded MV routines. Table 5 does, however, contain test results for two machines which underlie IBM and NAS configurations that could meet all requirements of the RFP. The tests were conducted under software environments that meet the RFP requirement set forth on page 16. The relevant processors are the IBM 3090/180S and the NAS EX 60, which is erroneously listed in the Argonne report as an AS/XL V60. The IBM system is rated at 30 MFLOPS. The NAS machine is rated at 29 MFLOPS--a difference of approximately 3%. The IBM 180S processor which meets the 30 MFLOPS requirement is the same processor used in the IBM 3090/200S, which consists of two, tightly coupled 180S processors. The IBM 3090/200S has a MIPS rating of 40 MIPS, the exact MIPS requirement for the first processor to be delivered in this procurement.

16. On information and belief the primary purpose of the 30 MFLOPS requirement was to improve IBM's competitive position in this procurement and to prevent NAS from bidding. On information and belief, the data in the Argonne National Labs report quoted above was available to Navy officials prior to the issuance of the RFP. The only NAS system which could provide a competitive solution to the initial MIPS and MFLOPS

requirements of this procurement is the EX 80. This processor consists of two EX 60s joined in a dyadic configuration. Since the 30 MFLOPS requirement must be satisfied by each processor, PacifiCorp would be unable to bid the NAS EX 80 unless NAS improved the machine's Argonne labs rating or was able to demonstrate that the machine could satisfy the Argonne labs requirement. In other words, PacifiCorp would be effectively precluded from proposing a NAS solution in the Navy procurement.

17. On information and belief, the Navy did not know prior to the filing of this complaint that NAS is currently able to meet the 30 MFLOPS requirement with the NAS EX 80. NAS has been working to fine tune the performance of its EX 60 so that the processor (which is used in the dyadic NAS EX 80) can achieve the 30 MFLOPS threshold. PacifiCorp understands that NAS has conducted internal tests which show that the EX 60's performance can exceed 30 MFLOPS using the precise tests required by the RFP.

18. Although the 30 MFLOPS requirement is no longer an absolute bar to NAS' participation in this procurement, it does prevent PacifiCorp from bidding NAS' most competitive solution. The initial configuration, which is delivered in the first month after award, must provide 40 MIPS of processing power. NAS is able to satisfy this requirement with its EX 70, a dyadic processor composed of two NAS EX 50s. The EX 80, on the other hand, is a much more powerful machine with a rating of 51 MIPS. There is a significant cost differential between the EX 70 and EX 80. However, PacifiCorp cannot propose the EX 80 under this REP because this processor cannot provide a vector facility with a 30 MFLOPS rating. The RFP, as presently worded, precludes all use of an EX 70.

19. On information and belief, the RFP's 30 MFLOPS requirement is not supported by the actual needs of the Naval Postgraduate School, and is simply a performance specification which helps define the initial IBM processor that the Navy wants to buy. The RFP does not even indicate that the Navy will take delivery of any vector facility during the first thirteen months after contract award. Thus, under the contract as awarded, the Navy may not actually buy any vector facility prior to the upgrade of the first processor or at any time thereafter. Moreover, the RFP provides no basis for the Navy's determination that it needs a vector facility with a rated speed of at least 30 MFLOPS.

20. The 30 MFLOPS requirement is arbitrary and irrational. The Argonne lab report specifically states that

the LINPACK benchmarks cannot fairly represent processor performance. The most current Argonne report states

> The timing information presented here should in no way be used to judge the overall performance of a computer system. The results reflect only one problem area: solving dense systems of equations using the LINPACK [1] programs in a FORTRAN environment.

21. And even this limited measure of performance may produce results which can best be described as perverse. A footnote to table 5 of the Argonne labs report notes the following results of the LINPACK tests described therein for certain Cray processors:

> The major difference between the CRAY 1-M and CRAY I-S is in the memory speed, the CRAY 1-M having slower memory. The timings show the CRAY 1-M to be faster than the CRAY 1-S. After much discussion and examination of the generated assembly language code it was determined that, in fact, the CRAY 1-M was faster for program. The code generated by the compiler causes the CRAY 1-S to miss a chain-slot. On the CRAY 1-M, because of the slower memory, the chain-slot is not missed, thus the faster execution time.
>
> (Emphasis added).

22. The 30 MFLOPS requirement is also irrational because of the way it is stated. As defined in the RFP, the requirement is stated on a per processor basis. This means that the number of MFLOPS available to Navy users will vary depending on the particular architecture which a vendor selects. For example, a vendor offering a three processor configuration would be required to provide a total of 90 MFLOPS. A vendor meeting the same requirement with only two processors would be required to provide only 60 MFLOPS. The Navy's processing requirements do not vary by 30-50% depending on the architecture of each vendor's solution.

23. The 30 MFLOPS requirement also fails to state the Navy's needs in functional terms as required by regulation. The Navy has not specified the extent to which its workload requires vector processing--e.g., by stating a number of hours that a vendor will have to provide vector as opposed to scalar processing. If the Navy defined its workload in functional terms, vendors could design the

configuration which optimally suited the Navy's true processing needs. And this solution might permit vendors to propose vector facilities with less than 30 MFLOPS processing power. It might also permit vendors to propose vector processors operating under other IBM operating systems than those specified in the RFP, thereby increasing the number of competitive solutions which could be proposed to meet the Navy's functional requirement.

24. For these reasons, the 30 MFLOPS requirement unreasonably restricts competition and is not rationally based on the Navy's minimum needs. On information and belief, the 30 MFLOPS requirement results from the Navy 's pro-IBM bias and is an effort by the Navy to insure that IBM wins this procurement.

b. The Requirement for ESA

25. The RFP contains conflicting requirements for the delivery of a new IBM operating system, ESA/370 (Enterprise Systems Architecture). ESA consists of two main pieces of software: MVS/SP Version 3 and DFP Version 3.1. On information and belief, IBM made MVS/SP Version 3 generally available in September, 1988. First customer shipment of MVS/SP Version 3 occurred at some time prior to September. DFP Version 3.1 became generally available, on information and belief, in December, 1988. First customer shipment of DFP Version 3.1 occurred at some time prior to December, 1988.

26. In the IBM plug compatible industry, first customer shipment generally refers to the shipment of software to selected customers for field trials prior to general release to all customers. The first customer shipment may precede general availability by 3-6 months.

27. Although page 7 of the RFP requires ESA/370 to be available on the proposed processors "within 12 months of this general availability from IBM," other sections of the RFP require availability of this product within 12 months of first customer shipment. The first customer shipment date is not stated in the solicitation. Thus, page 9 of the solicitation requires the proposed CPUs to run "ESA/370 (Enterprise Systems Architecture) and MVS/SP Version 3 within 12 months of its first customer shipment by IBM." And the section of the RFP labelled "Software Requirements" (page 12) requires support of "new, announced SCPs such as MVS/ESA, within 12 months of IBM's first customer shipment."

28. It is impossible for PacifiCorp to commit to support ESA within 12 months of IBM's first customer shipment.

Neither NAS nor Amdahl has committed to ESA support based on the date of IBM's first customer shipment. No one except IBM can even know when such shipments occur.

29. The ESA requirements are unreasonably restrictive and are not supported by the legitimate needs of the Naval Postgraduate School. On information and belief, the Navy does not have any functional requirement for delivery of ESA until the second half of 1990, at the earliest. The 3033 U16 which will be replaced in the initial delivery is currently operating under MVS/SP Release 1.3 with JES 3 networking option. RFP at 4. The RFP requires vendors to bring up another, and more recent, IBM operating system, VM/SP-XA Release 2 within six months of initial installation. RFP at 12. Once VM/SP-XA Release 2 is installed, the Navy's programs must be converted to operate under the new operating system in order to use the new features which this software provides. The work to perform this conversion is not part of the current RFP nor does the RFP give any indication that the Navy has determined how to perform this conversion. The conversion is likely to take three to six months. Thus, If a vendor installs VM/SP-XA Release 2 in the sixth month, as the RFP permits, the Navy's programs may not be fully operational under the new operating system until June, 1990. And even if the vendor installs VM/SP-XA Release 2 as described the RFP's delivery scenario (which assumes installation in July, 1989), the Navy's software will not be completely converted over to until sometime in the fourth quarter of this year.

30. The conversion to VM/SP-XA Version 2 will give the Navy considerably enhanced processing power. This increase in processing resources provided by the Version 2 conversion makes it unlikely that the Navy will need to undertake a quantum leap to another level of processing capability for quite some time. For example, MVS/370 as used by the Navy has limited address space for virtual storage and may only permit 16 megabytes of address space, thus limiting the type of applications which Navy users can bring up. VM/SP-XA Version 2 will increase the Navy's virtual storage addressing capacity from 16 million bytes to 2 gigabytes--that is, 2 billion bytes of storage. There is nothing in the RFP which suggests that this enormous jump in capacity cannot satisfy the Navy's needs for virtual storage address space for a considerable length of time. Without some showing of need, the Navy cannot justify a jump to another operating system after it has just acquired considerably more processing resources. The Navy has no valid reason to require ESA installation within 12 months of first customer shipment.

31. The Navy's position on ESA should be contrasted with its "requirement" for UNIX. As set forth on page 97 of

the RFP, vendors are required to provide UNIX Operating System support beginning in month 13. IBM currently does not support the required release of UNIX and is not likely to announce such support until the summer of 1989 with delivery likely 12 months after announcement. However, Amdahl is currently able to support a version of defined in the RFP. PacifiCorp further understands that Amdahl is willing to license this software to IBM. Notwithstanding the current availability of the software specified in the RFP, the Navy has postponed its UNIX requirement until IBM is likely to offer its own version of UNIX required by the Navy.

c. The Requirement to Incorporate All Announced Engineering Changes Prior to Demonstration.

32. The Navy recently issued Amendment 1 to the protested solicitation which effectively moves the required date for ESA availability up well before twelve months from first customer shipment. The Amendment, which had the stated purpose of correcting "administrative errors," also contained the following certification entitled "Engineering Changes":

> The offeror certifies that all Engineering Changes (ECs) that have been announced by the Original Equipment Manufacturer (OEM) on or before the date of proposal submission shall have been made to the equipment ordered under any contract resulting from this solicitation. These EC's shall also be incorporated into the offered equipment used for the line [sic, presumably live] test demonstration required by this solicitation.

33. Both NAS and Amdahl have already announced future support for IBM's MVS/ESA operating system. This support is implemented through engineering changes that alter the microcode, firmware, or printed circuit boards of the NAS and Amdahl processors. It will be impossible for either NAS or Amdahl to incorporate these changes into the equipment which is subject to benchmark within the time frame specified. The Navy has reserved the right to require a live test demonstration within seven days after proposal submission. RFP, Attachment 2. This schedule effectively requires Amdahl and NAS to implement ESA on their processors by May 5, 1989. The requirement is impossible, unreasonably restrictive and can only be satisfied by IBM.

d. The Navy's Migration Path for Additional Processors Unfairly Favors IBM.

34. Procurements of IBM and IBM compatible processors frequently use performance and design specifications to describe the desired processors. The specifications used for this purpose are MIPS (the processor's rated speed expressed in millions of instructions per second), the amount of main storage provided, and the number of CPU channels. By manipulating these specifications, a procurement can be effectively wired to impose significant competitive burdens on unwanted manufacturers. Manufacturers develop their pricing based on performance levels (the so-called price/performance ratio). The price of CPUs will increase as the CPU's power increases. Although the IBM compatible vendors all offer product lines which are roughly comparable to each other, none of the performance specifications for each vendor's machines line up exactly

35. As a result, a specification which requires a vendor to propose a processor rated at 40 MIPS or more can give significant competitive benefits to the manufacturer of the 40 MIPS machine. The same requirement imposes competitive handicaps on manufacturers who must propose machines with more than the required number of MIPS because they do not have machines rated at exactly the number specified in the solicitation.

36. As shown in detail below, the Navy has used specifications from the IBM product line to define its proposed upgrade or migration strategy. On information and belief, the Navy specified its upgrade requirements based on the performance characteristics of the IBM product line, rather than any legitimate analysis of its present and future requirements. Indeed, the combination of three specifications--30 MFLOPS, 40 MIPS and a limitation of the initial configuration to no more than a dyadic processor--exactly specifies the IBM 200S. In all but one instance, the targeted IBM processor exactly meets the Navy's MIPS, memory and channel requirements, whereas an offeror of competing, plug compatible processors must offer a machine with significantly more power and sometimes channels. In each instance, the plug compatible solution requires PacifiCorp propose a processor which exceeds the minimum requirements. As a result, the plug compatible alternatives must overcome a significant cost burden defined by the Navy's "requirement."

37. The Navy's "requirements," and the probable vendor solutions, are outlined below. The viability of the vendor solutions listed below assumes that the other restrictions described in this complaint are removed. The "+"

indicates an addition to the vendor's configuration to meet the requirements of the Navy's specifications. We have highlighted the areas in which the plug compatible vendors are clearly disadvantaged.

Contract Month 1 Requirement:

40 MIPS, 128 MB (Main); 256 MB (Extended Storage (ES)) 32 Channels

IBM 200S	Amdahl 5990-700	NAS EX 80
40 MIPS	63 MIPS	51 MIPS
128 MB (Main)	128 MB (Main)	384 MB (Main and Extended)
256 MB (ES)	256 MB (ES)	
32 channels	32 channels	32 channels

Contract Month 13 Requirement:

Expand to 60 MIPS; 256 MB (Main) 40 channels
(Addition of 20 MIPS, 128 MB (M); 8 channels)

IBM 180S+	Amdahl 5990-700	NAS EX 90
22 MIPS+	63 MIPS	70 MIPS
128 MB (M)	256 MS (M)+	512 MB+
16 channels+	256 MS (ES)	64 channels +
	40 channels+	

IBM 200S
40 MIPS
128 MB (M)
256 MB (ES)
32 channels

Contract Month 25 Requirement:

Expand to: 512 MB (ES) (i.e., additional 256 MB (ES)).

IBM 180S	Amdahl 5990-700	NAS EX 90
128 MB	256 MB (M)	768 MS+
256 MB (Es)+	512 MB (ES)+	
16 channels	40 channels	64 channels

IBM 200S
128 MB (M)
256 MB (ES)
32 channels

Contract Month 37 Requirement:

Expand to: 80 MIPS; 512 MB (M); 48 channels (i.e., add 20 MIPS; 256 MB (M) 8 channels).

IBM 200S (upgrade)+	Amdahl 1400 (upgrade)+	NAS EX 100 (upgrade)+
40 MIPS	105 MIPS	88 MIPS
256 MB (M)+	512 MB (M)+	1024 MB+
256 MB (ES)	512 MB (ES)	
16 channels	64 channels	64 channels
(available)		through RPQ

IBM 200S
40 MIPS
256 MB (M)+
256 MB (ES)
32 channels

Contract Month 49 Requirement:

Expand to: 1 gigabyte ES (i.e., additional 512 MB of extended storage).

IBM 200S	Amdahl 5990-1400	NAS EX 100
256 MB (M)	512 MB (M)	1536 MB +
512 MS (ES)	1024 MS (ES)+	
16 channels	64 channels	64 channels

IBM 200S
256 MB (M)
512 MB (ES)
32 channels

e. The RFP Fails to Define Critical Terms

38. The RFP defines certain key software requirements with the catch-phrase "or equivalent" but does not specify what equivalent means in the relevant context. For example, the RFP requires vendors to support an IBM FORTRAN compiler or equivalent. See RFP at 16. No one but IBM can support the specified IBM compiler. The Navy has not defined the salient characteristics of the "equivalent" compiler which it will accept. Thus, a non-IBM vendor who must, of necessity, propose an "equivalent" compiler, has no way of knowing what the Naval Postgraduate School will accept.

39. The RFP also requires offeror to provide "an extensive, high-performance, FORTRAN-library for scientific and engineering problems such as IBM's Extended Scientific Subroutine Library (ESSL) or equivalent." Id. Once again, the salient characteristics which define an equivalent subroutine library are not defined. Their content is left solely to the interpretation of Navy officials at a facility which has repeatedly demonstrated a pro-IBM bias.

3. **The RFP Does Not Specify A Delivery Requirement for the Vector Facility.**

40. The Navy's RFP contains a serious defect in that it does not state at what point in the system life the Navy will evaluate the various vector processing elements that offerors must supply. The evaluation scenario on page 97 of the RFP contains no indication as to when the Navy intends to install vector processing capability. The contract schedule (page 2) lists the minimum quantity of vector processing elements--and all other CLINs which will not be delivered with the first CPU--as 0. Thus, it is reasonably clear that a vendor is not required to deliver vector processing capability with the first shipment. There is no indication as to when a vendor should assume installation of vector capability. As a result, it will be impossible to evaluate offerors on a common basis, since each offeror must make different assumptions as to when the vector facility will be required.

41. In addition, the Navy's failure to specify a delivery schedule permits the Navy impermissible discretion to evaluate vector processing in a manner which most favors IBM. IBM's competitive position will be hurt depending on the number of months in which the vector facility is evaluated. This is because the solicitation is imposing evaluated cost differentials on vendors' solutions based on their consumption of power and cooling. IBM's vector facility requires more power and cooling than the vector facilities offered by NAS.

power and cooling than the vector facilities offered by NAS. Thus, IBM faces an evaluation penalty each month in which its vector is evaluated against NAS'. By failing to state the number of months in which vector facilities will be evaluated, the Navy has given itself the flexibility to define this evaluation methodology however it wants after it sees the numbers which IBM proposes. In this manner, the RFP permits the Navy to manipulate the evaluation scenarios to the benefit of IBM and to the detriment of a NAS solution.

4. The Naval Postgraduate School's Procurement of IBM Products Has Been Fatally Flawed With Pro-IBM Bias.

42. This RFP is an example of the Naval Postgraduate School's uninterrupted pattern of bias favoring acquisition of IBM hardware and software. As described in the RFP, the school's computer facility utilizes a network of IBM mainframe computers connected by an IBM multi-system communication unit. None of the school's central processors or tape or disk storage devices were purchased from the competitors of IBM who manufacture IBM compatible central processors and peripheral storage equipment.

43. The plethora of IBM equipment at the Postgraduate School is no accident. The school has employed a history of procurement practices designed to elicit the same predictable outcome--acquisition of IBM products. An example of the school's ingrained bias was exposed in two related protests recently filed with this Board regarding procurements where the school was alleged to have improperly restricted competition to IBM products. See Storage Technology Corporation, GSBCA Nos. 8763-P, (filed November 6, 1986), 8764-P (filed November 12, 1986).

44. The first Storage Technology protest involved the school's purchase of an IBM direct access storage device (DASD) under a GSA schedule. IBM was given the order after StorageTek's proposal was found unacceptable because its DASD was not compatible with the school's existing IBM controller. The school had not previously identified compatibility with the IBM controller as a requirement. Notwithstanding, StorageTek's proposal included providing a substitute "plug compatible" controller at no cost. The school determined it did not have adequate space for the no-cost controller.

45. Purchasing this IBM-made DASD was such a foregone conclusion at the school that in another solicitation it described the IBM DASD equipment as part of its existing configuration. This description appeared in a solicitation which was issued the school was still considering the

StorageTek proposal for the DASD equipment, and a full month before it notified StorageTek that its proposal was unacceptable.

46. The solicitation containing the description of the IBM DASD became the subject of StorageTek's second protest. In this solicitation, again for DASD equipment, the school specifically required compatibility with its IBM storage controllers. StorageTek protested the compatibility requirement as restrictive and creating a de facto specific make and model procurement since no IBM equivalent DASDs are compatible with IBM controllers. The protest was settled in StorageTek's favor with the parties agreeing to an amendment which would allow non-IBM vendors to offer substitute controllers.

47. While pursuant to the Board's December, 1986, order the restrictive language was stripped from the solicitation, the school still managed to obtain its preferred, IBM products. The school issued the solicitation amendment on February 5,1987, but failed to send one to StorageTek. Nor did the school inform StorageTek that the amendment had gone out. On February 27,1987, the bidding period closed and the contract was awarded to the only bidder--IBM.

48. The pro-IBM bias at the Postgraduate School has also led school officials to solicit the IBM Corporation for funds to support school activities. In February, 1986, IBM provided requested funds. Several school officials were involved in the establishment of an unauthorized bank account for the IBM money and a foundation to handle these and other funds. The IBM funds were used to support a workshop and other official activities of the Naval Postgraduate School. At least one Navy official failed to disclose his position with the foundation in his annual Financial Disclosure Report (SF-278).

49. One of the key officials at the Postgraduate School involved in soliciting money from IBM was previously employed by IBM for more than 20 years. This individual also signed a consulting contract with IBM during the period in which the solicitation and disbursement of IBM funds occurred. It is not known whether this contract or a successor contract is currently in effect. It is not known whether other officials at the Postgraduate School have consulting contracts with IBM. A subsequent investigation by the Navy Inspector General found that the individual in question improperly used his network of professional contacts at IBM for sponsorship of official activities. The Inspector General's report states:

> ...[the official involved] used his own network of professional contacts and approached only IBM. It was inappropriate for [the official] to limit his contacts and make such an exclusive representation, and it was also inappropriate [sic], under the circumstances to handle the money from IBM without transferring it to the proper accounting agency. Having thus acted, [the official's] official activities were compromised with the perception of the pursuit of private interests.

Report at 6. See Exhibit 1 to this complaint.

50. While the Inspector General did not find evidence of criminal activity, the Navy IG did find violations of Executive Order 11222 and numerous official instructions issued by the Secretary of the Navy. The IG specifically stated that the Postgraduate School's conduct in connection with a workshop that was funded by IBM "resulted in or gave the clear appearance of: (a) preferential treatment to IBM..."

51. This example illustrates the Postgraduate School's tightly-knit relationship with IBM. It also reveals that at least one highly-placed official at the school maintained consulting arrangements with IBM at or about the same time IBM was "competing" for contracts at the school. On information and belief, the ongoing and pervasive ties between IBM and school personnel has directly resulted in a pro-IBM bias in developing specifications and performing technical evaluations for the Postgraduate School's acquisitions.

52. The Postgraduate school's longstanding pro-IBM bias has been allowed to flourish with the complicity of NRCC Long Beach, the buying activity for the procurement at issue. NRCC Long Beach has acted previously as a buyer for the Postgraduate school in acquisitions of IBM hardware and software under the IBM schedule. And NRCC Long Beach was also the buyer in a biased IBM compatible procurement which it conducted on behalf of the Naval Construction Battalion Center--Port Hueneme. That procurement was the subject of three GSA Board protests filed by VION Corporation which proposed a NAS processor. The first two protests were described in the third protest complaint filed December 20, 1988, as follows:

> 7. This is the third protest that VION has had to file to compel the Navy to comply with the RFP's requirements and applicable legal principles. In Case No. 9602-P, VION protested against the NRCC's determination that VION's proposal was nonresponsive. NRCC subsequently withdrew that determination.

> 8. In Case No. 9625-P, VION protested against NRCC's issuance of an amendment to the RFP that so changed the mandatory requirements that it would have made VION's proposal nonresponsive. On the first day of the hearing before Judge Stephen Daniels, NRCC agreed to withdraw that amendment. NRCC also agreed not to issue any further amendment to the RFP that would affect the acceptability of VION's proposal.

53. The third VION protest was sparked by NRCC Long Beach's blatantly illegal award of the contract to an alleged minority firm called Aidant Corporation which had proposed IBM equipment. Aidant's proposal was also higher priced than VION's. The Navy made the award by applying an evaluation preference for small disadvantaged businesses to the Aidant bid which, by regulation, was inapplicable to the procurement at issue. After the third VION protest, the NRCC Long Beach finally relented and agreed to award the contract to VION. The stipulation dismissing the protest states in part:

> 1. The Navy acknowledges that, under the RFP's explicit terms and applicable legs principles, it should have awarded the contract to VION (which proposed NAS [National Advanced Systems] equipment) and not to Aidant (which proposed IBM equipment) because VION is the low priced, responsive offeror. VION Corporation, GSBCA No. 9860-P, December 23,1988.

54. Clearly, NRCC Long Beach has neither the will nor the ability to remove pro-IBM bias from its procurements. Instead, this buying activity has been the willing tool of Navy users who have abused procurement regulations to achieve pre-ordained results.

55. Indeed, NRCC Long Beach has indicated that it might even use the same ruse in this procurement that it used less than five months ago to exclude VION's proposal. The procurement at issue contains a clause permitting the application of a small disadvantaged business evaluation preference. As in the last VION protest, the application of such a preference would be blatantly illegal since under present law, the preference cannot apply to procurements subject to the Trade Agreements Act. The procurement at issue is clearly covered by the Trade Agreements Act. Although the NRCC Long Beach was requested to remove the offending clause, or at least indicate that the clause did not apply to this procurement, it refused to do so.

5. Violations of Statute and Relation.

56. For the reasons set forth above, the protested procurement violates the Competition in Contracting Act ("CICA"), including 10 U.S.C. §§ 2304(a)(1) (agencies must use full and open competition) & (f)(1) (agencies must justify sole source acquisitions) and 2305(a)(1) (agencies must specify their needs in a manner designed to achieve full and open competition), the Federal Acquisition Regulations ("FAR"), including FAR 6.101 (requirements for full and open competition), 6.303 (requirements for sole source justification) 10.002(a) (requirements for full & open competition), 10.004(a) (requirements to establish specifications in terms of actual minimum needs), 15.605 (requirements to use fair evaluation criteria), the Brooks Act, 40 U.S.C. §759, including subsection (b) (agencies must comply with DPA requirements) & (g) (requirement to justify sole source or make & model), and the Federal Information Resource Management Regulations ("FIRMR") including FIRMR Subpart 201-11 (requirements for full and open competition), 201-30.013 & 201-30.013-1 (preference for functional specifications).

57. In addition, the Navy's use of unreasonably restrictive specifications violates FAR 6.101, 10.002(a) & 10.004(a) and FIRMR 201-11.001(b), 201-11.002(b).

58. As set forth above, the Postgraduate school has no demonstrated need for the items required by the restrictive specifications described herein. Accordingly, these requirements are unnecessary, in excess of the Government's actual minimum needs, and violate FAR 6.101, 10.002(a) & 10.004(a) and 201-11.001(b) & 201-11.002(b).

59. Upon information and belief the solicitation was restrictively drafted as a result of the Postgraduate school's longstanding bias in favor of sole source IBM acquisitions and against full and open competition, resulting in violations of 10 U.S.C. § 2304(a)(1) & (f)(1) & 2305(a)(1), FAR 6.101, 6.303, 10.002(a), 10.004(a), and FIRMR 201-11.

60. Upon information and belief, the Navy applied for a DPA for this procurement but did not notify GSA that, for all practical purposes, its solicitation was based upon a sole source specification. Accordingly, the DPA issued by GSA was based upon erroneous information and invalid. Therefore, the Navy has violated the Brooks Act, 40 U.S.C. §759(b) and (g). In addition, on information and belief, the Navy has not prepared sole source justifications required as a result of the unreasonable restrictions alleged herein, which failure violates 40 U.S.C. §759 (g) and FAR 6.303.

61. The solicitation describes requirements in terms of an IBM model or equivalent, but fails to set forth those salient physical, functional, or other characteristics of the referenced IBM products which are essential to the needs of the Government. Accordingly, the solicitation violates FAR 10.004(b) and DFAR 210.004(b)(3).

WHEREFORE, PacifiCorp respectfully requests that the Board:

(1) Conduct a hearing to consider the suspension of the Navy's procurement authority pending the Board's decision on the merits of this protest;

(2) Suspend the Navy's procurement authority under the solicitation pending a decision by the Board on the merits of this protest;

(3) Conduct a hearing on the merits of this protest;

(4) Grant this protest on the merits, require the Navy to revise the procurement specification as requested herein;

(5) To eliminate any recurrence of bias, require the Navy to transfer the procurement to a different procuring activity and to convene an unbiased technical panel with sufficient expertise to review all specification changes required by this protest or any future amendment, assure that such changes are consistent with the requirements for full and open competition, and to monitor the Navy's conduct during this procurement to insure that all vendors are treated fairly.

(6) Suspend the procurement authority of NRCC Long Beach to purchase products and services of the IBM Corporation unless and until NRCC Long Beach demonstrates to the Administrator of the General Services Administration that it is able to acquire such products and services without bias or prejudice;

(7) Exclude from any involvement in the procurement of any product or service which could be supplied by the IBM Corporation all personnel of the Naval Postgraduate school unless and until such personnel are able to demonstrate to the Administrator of the General Services Administration that they are able to acquire such products and services without bias or prejudice;

(8) Award PacifiCorp its protest and proposal preparation costs; and

(9) Grant PacifiCorp such other and further relief as the Board deems appropriate.

Respectfully submitted,

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Dated: April 12, 1989

CERTIFICATE OF SERVICE

I hereby certify that on this 11th day of April, 1989, a copy of the foregoing protest complaint was served by Federal Express on:

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APPENDIX F

A. SUMMARY OF PROTEST ISSUES AND ACTION TAKEN BY NPS

Section(s)	Issue	Actions Taken
C.1.1-4	Background	No Action Required
C.2.a.5-7	Vector Processor (VP)	Never a RFP Requirement
C.2.a.8-12	Bar to channel-attached array processors	Deleted from RFP
C.2.a.13-24	Argonne Report and 30 MFLOPS performance	Deleted from RFP. Benchmark results used to determine performance levels of new machine
C.2.b.25-30	ESA Schedule	Never a RFP Requirement
C.2.b.31	UNIX Requirement	Deleted from RFP
C.2.c.32	ESA Engineering Changes	Misunderstanding by vendor. Never an issue for protest. Resolved through agency-vendor communications
C.2.d.34	Migration path-evaluation time table	Time table remained the same. Processor systems (initial 1 & 2 upgrades to be determined by bench mark versus MIPS. Benchmark results used to determine performance levels of new machine
C.2.e.38-39	Definitions of "or equivalent" software	Changed in RFP

Section(s)	Issue	Actions Taken
C.3.40-41	Delivery dates for vector processor (VP) elements	Vector processor was never a requirement in RFP. However, there was a clause in the RFP which stated that if VP was bid, elements must be delivered as prescribed by schedule
C.4.42-47	BIAS-NSC (Oakland) contracts for 3380s and 3840s	No Action Required - Information Only
C.4.48-51	Computer Science Department Incident (NPS)	No Action Required - Information Only
C.4.52-53	Other NRCC Protests (Non-NPS)	No Action Required - Information Only
C.5.56-61	Alleged violations of FARs, FIRMRs	No Action Required - Information Only

APPENDIX G

A. GLOSSARY

ADP	AUTOMATED DATA PROCESSING
ADPE	AUTOMATED DATA PROCESSING EQUIPMENT: Equipment that is used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching interchange, transmission, or reception of data or information by all federal agencies.
ADPSO	AUTOMATED DATA PROCESSING SELECTION OFFICE
APR	AGENCY PROCUREMENT REQUEST
ASDP	ABBREVIATED SYSTEM DECISION PAPER
ASN (S&L)	ASSISTANT SECRETARY of the NAVY for SHIPBUILDING and LOGISTICS
BAFO	BEST and FINAL OFFER
BENCHMARK	A routine or grouping of routines which are to be run on several different computer configurations in order to obtain performance capabilities of various computer configurations in order to obtain comparative performance capabilities of various computer systems.
BROOKS BILL	Public Law 89-306 passed in 1965 that names the General Services Administration as the sole procurement authority for automatic data processing equipment. It is an act which provides for the economic and efficient purchase, lease, maintenance, operation, and utilization of automatic data processing equipment by the federal departments and agencies.
CBD	COMMERCE BUSINESS DAILY: Paper published every working day by the Department of Commerce which lists virtually every proposed DoD procurement estimated to exceed $25,000. It also lists major DoD prime contract awards that have potential subcontracting opportunities.

CICA	COMPETITION IN CONTRACTING ACT of 1984
CICS	CUSTOMER INFORMATION CONTROL SYSTEM
CNO	CHIEF of NAVAL OPERATIONS
DEERS	DEFENSE ENROLLMENT ELIGIBILITY REPORTING SYSTEM
DMDC	DEFENSE MANPOWER DATA CENTER
DoD	DEPARTMENT of DEFENSE
DoN	DEPARTMENT of the NAVY
DoN ADP AAP	DEPARTMENT of the NAVY AUTOMATED DATA PROCESSING ACQUISITION ASSESSMENT PANEL
DONIRM	DEPARTMENT of the NAVY INFORMATION RESOURCES MANAGEMENT
DPA	DELEGATION of PROCUREMENT AUTHORITY
EC	ENGINEERING CHANGES
EPMAC	ENLISTED PERSONNEL MANAGEMENT CENTER
ESA	ENTERPRISE SYSTEMS ARCHITECTURE: New IBM 370 architecture operating system which consists of MVS/SP Version 3 software combined with DFP Version 3.1 software
FAR	FEDERAL ACQUISITION REGULATION
FEDSIM	FEDERAL SYSTEMS INTEGRATION and MANAGEMENT CENTER
FIPS	FEDERAL INFORMATION PROCESSING STANDARDS
FIRMR	FEDERAL INFORMATION RESOURCES MANAGEMENT REGULATIONS
FY	FISCAL YEAR
GAO	GENERAL ACCOUNTING OFFICE
GB	GIGABYTE
GSA	GENERAL SERVICES ADMINISTRATION
GSBCA	GENERAL SERVICES Board of CONTRACT APPEALS

HASC	HOUSE ARMED SERVICES COMMITTEE
ICP	INVENTORY CONTROL POINTS
IFB	INVITATION for BIDS
IG	INSPECTOR GENERAL
IS	INFORMATION SYSTEMS
KO	CONTRACTING OFFICER
LCM	LIFE CYCLE MANAGEMENT
MB	MEGABYTE
MENS	MISSION ELEMENT NEEDS STATEMENT
MFLOPS	MILLIONS OF FLOATING POINT OPERATIONS PER SECOND
MIPS	MILLIONS OF INSTRUCTIONS PER SECOND
MVS	MULTIPLE VIRTUAL STORAGE
NAVAIRDEVCEN	NAVAL AIR DEVELOPMENT CENTER
NAVDAC	NAVAL DATA AUTOMATION COMMAND
NAVPGSCOL	NAVAL POSTGRADUATE SCHOOL
NMPC	NAVAL MILITARY PERSONNEL COMMAND
NPS	NAVAL POSTGRADUATE SCHOOL
NRCC	NAVAL REGIONAL CONTRACTING CENTER
OEM	ORIGINAL EQUIPMENT MANUFACTURER
PM	PROGRAM MANAGER
POM	PROGRAM OBJECTIVE MEMORANDUM
RA	REQUIREMENTS ANALYSIS
RFP	REQUEST for PROPOSAL
SECAF	SECRETARY of the AIR FORCE
SECDEF	SECRETARY of DEFENSE

SECNAV	SECRETARY of the NAVY
SPAR	STOCK POINT ADP REPLACEMENT
SWC	SOFTWARE CONVERSION
SYSTEM	A system is that combination of elements which function together to produce the capabilities required to fulfill a mission need
SYSTEMS INTEGRATOR	A firm which deal directly with procuring federal agencies and subcontract with other manufacturers for the components of the overall system
VM	VIRTUAL MACHINE

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